



46251/B

Printer's Grammar:

CONTAINING

A CONCISE HISTORY OF THE

ORIGIN OF PRINTING;

Also, an EXAMINATION of the

SUPERFICIES, GRADATION, and PROPERTIES

OF.

The DIFFERENT SIZES of TYPES, cast
by LETTER FOUNDERS;

Various TABLES of CALCULATION; MODELS of
LETTER CASES; SCHEMES for casting off
COPY, and IMPOSING;

AND MANY OTHER

REQUISITES for attaining a perfect Knowledge both in the THEORY
and PRACTICE of the ART of PRINTING.

WITH

DIRECTIONS to AUTHORS, COMPILERS, &c.

How to Prepare COPY, and to Correct their own PROOFS.

Chiefly collected from SMITH's Edition.

TO WHICH ARE ADDED

DIRECTIONS for PRESSMEN, &c.

The whole calculated for the Service of All who have any Concern in
the LETTER PRESS.

L O N D O N:

PRINTED BY L. WAYLAND;

AND SOLD BY T. EVANS, PATER-NOSTER-ROW.

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TO THE
P R I N T E R S
IN
GREAT BRITAIN, IRELAND,
AND
A M E R I C A,

This G R A M M A R
IS INSCRIBED,

BY THEIR

OBEDIENT SERVANT,

THE EDITOR.



A C O N C I S E

H I S T O R Y

O F T H E

O R I G I N

O F

P R I N T I N G.

AS it is proposed to confine this historical account of the Art of Printing, as now practised in Europe, to letters cast in metal, we shall wave that of printing on pages cut in blocks of wood, and what is generally supposed to have been in use among the Chinese many ages before the present method was introduced into Europe.

The present Art is but three hundred and thirty-five years old; and it long remained an undetermined point between the city of Mentz in Germany, and the

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city

city of Haerlem in Holland, concerning the place where, and the person by whom, this divine art was first invented and practised; but, at this time, the majority of voices have determined the dispute in favour of Mentz; however, we shall give both their pleas.

It is said to be first attempted at Mentz, between the years of 1440 and 1450, by John Fust or Faust, John Meydenbuch, and John Genesteisch surnamed Guttenberg. It was long a controverted question, by many learned antiquarians, whether Guttenberg or Faust was the Inventor of that Art, till happily the original instrument was found; whereby it appears, that the latter only connected the others with him for the sake of their purses, he not being able to proceed without, on account of the great expences attending the cutting of the blocks of wood; which, after they were once printed from, became entirely useless for any other work. This instrument, which is dated Nov. 6, 1455, is decisive in favour of Guttenberg; but the honour of single Types made of metal, is ascribed to Faust, wherein he received great assistance from his servant and son-in-law Peter Schoeffer, who devised the punches, matrices, &c. for casting them; on which account he was taken into partnership by his father-in-law, who, in 1455, had a quarrel with, and separated from, Guttenberg. Those who have asserted that Faust was the first Inventor of Printing, have given for a reason, that they have never seen any book with Guttenberg's name to it; without considering, that their first essays in Printing, both by blocks and move-

able types, being sold for manuscripts, were anonymous; the Invention being by them intended to be kept secret: nor was it divulged till their disagreement, by which time Faust had made himself master of the Art, and Guttemberg was not able to proceed in it alone owing to his circumstances.

The inhabitants of Haerlem assert that Laurenz Janz Koster of that city was the Inventor of Printing, about the year 1430: but that, in the infancy of the Invention, he used wooden blocks; yet after some time he left off that method, and cut letters on steel, which he sunk in copper matrices, and fitting them into iron moulds, he cast single letters of metal in those matrices. They assert also, that his companion and assistant, John Guttemberg, stole away his tools while he was at church, and with them went to Mentz, where he set up and practised the Art. They say much of a book intitled *De Spiegel*, printed at Haerlem, in Dutch and Latin, which is there yet to be seen; and insist on that book to have been the first that ever was printed; but yet, as it has no date, there are no positive proofs to ground their assertion on.

The learned Dr. Willis, of Oxford, made a studious inquisition into the origin of this invention, and in the following concise manner delivered his opinion: 'About the year 1450 the Art of Printing was invented and practised in Germany: but whether first at Mentz or Haerlem is not determined; for it appears, upon an impartial inquiry, that those who had it in consideration before it was brought to perfection, dis-

agreeing among themselves, separated company, and some of them at Haerlem, and others at Mentz, pursued the practice of their former employ at one and the same time.'

There is at Mentz, on the front of the house wherein Guttemberg lived, the following inscription, which was put up in the year 1507.

JOANNI GUTTEMBERGENSI
MOGUNTINO,
QUI PRIMUS OMNIUM LITERAS ÆRE
IMPRIMENDAS INVENIT,
HAC ARTE DE ORBE TOTO BENE MERENTI;
YVO VINTIGENSIS
HOC SAXUM PRO MONUMENTO POSUIT.

Jo. Christ. Seitz's blind partiality to Holland has led him into so many mistakes in his Historical Narrative of the Invention of Printing, which is little more than a revival of the old legend of Adrian Junius, and so stuffed with forgeries and calumnies, tending to deprive both Guttemberg and Faustus of the honour of being the first Inventors of the Art of Printing, the æra of which he carries as far back as the year 1428, attributing it, without the least foundation, to one Laurentz Jansz, surnamed Koster of Haerlem, that it may with safety be rejected.

The first printed book upon record, is the Book of Psalms, by John Faust of Mentz, and Peter Schoeffer, in 1457, on the 14th of August. However, after this first essay, they are supposed to have printed Durand's Rationale Divinorum, in 1459, and the Latin vocabulary, intituled Catholicon, in 1460: but what signalized Faust and his Art most, was the first printed Bible, which he began in 1450, and finished in 1460; when Faust, carrying a parcel of printed copies of it to Paris, and offering them to sale as manuscripts, had the misfortune to be imprisoned, under suspicion of dealing with the devil; because the French could not otherwise conceive how so many books should so exactly agree in every letter and point; nor could he obtain his liberty till he had discovered the method by which they were done. In 1466 he printed a quarto edition of Tully's Offices, and the year following another edition of the same book, as may be seen in the catalogues of the scarce and curious books belonging to the Libraries of both our Universities.

From Haerlem it passed to Rome, in 1467; and in 1468 it was carried to Venice and Paris. Hitherto the proficient in this new Art had proceeded no further than in the common alphabet, suited to the vulgar and Latin tongues. The Gothic alphabet, as it most resembled the manuscripts of those times, was the first attempt; then some of the Italian Princes introduced the Roman alphabet; and, in a short time, brought it to that perfection, that, in the beginning of the year 1474, they cast a letter not much inferior to the best types of the present

present age; as may be seen in a Latin Grammar, written by Omnibonus Leonicens, and printed at Padua, on the 14th of January, 1474; from whom our grammarian, Lilly, has taken the entire scheme of his grammar, and transcribed the greatest part thereof, without paying any regard to the memory of this author. At last, the Italic alphabet came much in vogue; but there were no Greek types till about the year 1476, when the Italian Printers cast them upon the same principles as they had done the other alphabets: yet we are not able to ascertain, whether this was first introduced by the Venetians, Milanese, or Florentines, each of them claiming the reputation of that improvement: tho' it is universally allowed that two Jewish Rabbins, Joshua and Moses, were the first who published the Hebrew character in separate types at Saccino, a little city in the Duchy of Milan, in the year 1480.

About the end of the 16th century, the Vatican and Paris Printers introduced the Syriac, Arabian, Persian, Armenian, Coptic or Egyptian characters; which, with several other Chinese and Indian Types, have been improved and published by the Printers in London.

This Art has also passed from Europe to Goa, and the Phillippine islands in Asia; to Lima, Mexico, Boston, New York, &c. in America, and to Morocco in Africa. Besides, amongst other curiosities, and pieces of antiquity, a reverend Clergyman has convinced us of the vulgar error, which reports that Printing is rigorously prohibited throughout the Turkish Empire,
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by shewing ‘the Capitulations and Articles of Peace between the King of Great Britain and the Sultan of the Ottoman Empire, printed at Constantinople, by Abraham Gabai Chafnahat, Anno 1663.’

Thus we have briefly shewn where, and by whom, the Art of Printing with separate Types was invented; and, also, how it was at first dispersed.

In what uncertainty the history of the first use of Printing in England is, may be seen by the following imperfect detail. Some of our Almanac makers tell us, that Printing was first used in England, 1443, about seven years before it was practised, or, about three years after it was thought of: others say, not till after 1459. The workmen of the Printing-Prefs, at the Theatre in Oxford, in a paper printed by them on the 23d. of August, 1729, affirm that the noble Art and Mystery of Printing was first invented in the year 1430, and brought into England in the year 1447; a mistake, perhaps, for 1474. The learned Mr. Collier assures us, that the Mystery of Printing appeared ten years sooner at the University of Oxford, than at any other place in Europe, Haerlem and Mentz excepted; which fixes the introduction of it there so early as 1457: since it is certain that it appeared at Rome, and elsewhere in Europe, in 1467; though by the date put in the margin, he seems willing to have had it thought, that it did not appear at Oxford before 1464. The diligent collector of the Annals of Printing, supposes this Art first brought into England in 1460; and Mr. Bailey implicitly follows Atkyns’s romance

mance of the introduction of it in King Henry VIth's reign, or before 1460. But the generality of our English chroniclers, who mention it, tell us, that Printing was first practised by Mr. Caxton, in 1471, at Westminster, under the Patronage of the Abbot.





T H E

PRINTER'S GRAMMAR.

C H A P. I.

Of Roman, Italic, and Black Printing Letter.

CONFORMABLE to the general method which is observed in Grammars, we begin *this* also with the principles thereof, viz. LETTERS; with this difference, that instead of applying their signification, as in others, to the art of speaking or writing some particular language, we shall consider them as the chief of Printing Materials; and in the course of this Chapter, treat of their Contexture, Superficial Shape, and such Properties as come under the cognizance of Printers, Booksellers, and others, who are judges of Printing. Accordingly, we shall not confine ourselves to the bare Letters of different Alphabets, but shew what other Sorts are comprehended in a Fount of Letter, cast either for Sacred, Ancient, or Modern languages: of which, those of the last class being the most prevailing,

we shall, therefore, give the preference to those characters which are appropriated not only to our own, but other European languages.

The Types, or Letters, which are made use of for printing in England, are either *Roman*, *Italic*, or *Black*.

S E C T. I.

Of Roman Printing Letter.

ROMAN, is at present, the most general Letter which is used for Printing; and has long been the national character, not only of Great Britain and Ireland, but also of Portugal, Spain, France and Italy; whereas in Germany, and in the kingdoms which lie round the Baltic, they print with Letters which owe their formation to the Gothic characters: nevertheless, many of those nations print whole works in their own language, with Roman Letter: and that the Germans themselves, as well as those who patronize their characters, have not yet intirely quitted them, and made Roman Letter more universal, is chiefly owing to their apprehensions of sharing the fate of the primitive Printers, who, in attempting to introduce Roman characters, suffered greatly from the dislike which the Learned then shewed to the works which had been done in that letter; whereby the former were obliged to return to printing in Gothic characters, to which men of
literature

literature had been accustomed, and which, resembling the writing of Monks, it was difficult to persuade people to approve of any thing which had the least shew of bearing against monastic interest.

The same reason may be given why the Dutch have not turned Black Letter out of their Printing-houses, but still make use of it, especially in books of devotion, and religious treatises designed for general use; whereas curious and learned subjects are frequently printed in Roman. The Germans, indeed, have more than once made essays to print prayer-books in Roman Letter, to try how they would be received by the public: but it has been observed, that this method of bringing people into the Printer's scheme, would not take; and that the small impressions of these books came into the hands of such only as were either curious, or would be thought learned, when they should be seen reading in a book printed in characters which the vulgar people in Germany persuaded themselves should be appropriated to no other than the Latin Language. However, what has frustrated the design of the German Printers, has not intimidated those in Sweden; where, by the authority of the proper supporters of so noble a plan, they have of late made considerable steps towards abolishing German Types, by printing the New Testament, the Pfalter, and other school-books, in Roman Letter; by which tis hoped, Printing, in that quarter, will put on a better face; and their hitherto established Printing Letters become obsolete and antiquated.

The appellation itself which the subject-characters bear, is sufficient for us to conclude, that it owes its being to the ancient Romans; tho' the face of the present, and the face of the original Roman Letters are greatly changed, by the improvements which they have received from time to time, according to the laws and rules laid down by eminent penmen. The Germans and their confederates, differ with us here, in calling all those sizes of Letter *Antiqua*, which we, as well as the French, and other printing nations, comprehend under the name of *Roman*; which, were it matter of any importance, would deserve our inquiry, to see whether it is done to deprive the ancient Romans from an acknowledgment due to their memory, for the Invention of their Letters; or whether it is to serve for an open confession that they have not yet been at the pains to bring their *Antiqua* to the same perfection as their neighbours have done the *Roman*.

That *good* Roman makes the best figure in a Specimen of Letters, may be said without reserve, especially as we would be understood not to pronounce all Letter *good* which is *new*; but only such as has the necessary accomplishments as well in its appearance, as substance. The first of these good qualities, therefore, of Letter, consists in its being of a *true*, or rather *good* shape; since it is impossible to maintain the first, without involving ourselves in controversies which cannot be decided till such rules are established as may be a standard for the exact uniformity of each Letter in particular. We shall therefore conclude, with the ingenious Mr. *Moxon*, ' That the Roman Letters
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were originally invented and contrived to be made and consist of Circles, Arches of circles, and straight Lines; and that therefore those Letters that have these figures, either entire, or else properly mixt, so as the course and progress of the pen may best admit, may deserve the name of *true* shape.' The before-mentioned mathematical rules, therefore, being observed, and properly applied, by the Letter-cutter, will produce Roman characters, of such harmony, grace, and symmetry, as will delight and ease the eye in reading; by having their *Fats* and *Leans* blended together with such sweetness as amazes a close examiner into the proportion which the smallest Letters bear to those of larger sizes: but to say, positively, that every Founding House can boast of *true*-shaped Letters, would be speaking with too great forwardness—since it has been thought, even by able Penmen, that none could cut two Letters of the same Signification, so as to bear an exact likeness to each other; and that, as it was impracticable to *write* a true Duplicate on *Paper*, it was impossible to effect it by those who attempted in *Steel*.——But Messrs. *Fry and Sons*, Letter Founders, in London, have incontrovertably proved that whatever may be done with the Pen, the greatest likeness of letters of the same Signification are made by *them* in Steel, from the least to the greatest sizes; and that accented Letters and Ligatures are made so much in the exact shape and symmetry with those of the mean Alphabet, that the best Judges cannot possibly discover any difference between them.—So far we may safely say, respecting the *true* shape
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in Letters, and that these Founders have exerted themselves more than their neighbours in casting good Letter, for tho' the authorities about the *Invention* of metal Types are in favour of the Germans, the meliorating and improving them cannot be more justly claimed by any, than by Messrs. *Frys*, who have long distinguished themselves by the goodness of their Letter—the Prefs-work from which has been thought by some who have had no proper conceptions about Printing, to have proceeded from *Silver* Types—But a good and neat Prefsman can best inform them, that it is not Silver Types, on which good Prefs-work depends, but that the best common metal will produce, with care, equally good work.

We may therefore conclude that they take more than common pains in finishing their Punches, and removing all such irregularities as may obstruct their making a smooth and even impression when they are sunk into Matrices, first well prepared for the purpose: and as their Letter is generally cast of good metal, and stand true, and exact in line, besides well dressed: no wonder that it has recommended itself into the most considerable Printing-houses in this city, and, most probably, will be received in the several others, unless it shall appear that these Founders should design to promote their own interest by detriminting that of Printers.

What has been said about *true* shape in Letters, relates chiefly to Roman; but, in our further observations upon the Properties of good Letter, we shall com-

comprehend all other fusil Types as are cast *here*. Accordingly, the gooddness of Printing-letter being not confined to true shape alone, consists also in having a *deep* face; which depends, first, upon the Punches being cut to a reasonable depth, and their Hollows deepened in proportion to the width of the respective Letters; and, secondly, upon the Punches being sunk deep into Matrices: for if either of these two requisites is neglected, the Letter, in course, will have a shallow face, and prove unprofitable to the purchaser; as it is in France, where Printers have very great reason to complain of the shallowness of Letter cast by their Founders. Mr. *Fertel*, Printer, at St. Omer, in particular, exclaims against this imposition in the following manner. ‘We need not wonder,’ says he, ‘that our Press-work does not look better; for if the paper is apt to sink, or otherwise deceives the person that wets it; and the ink happens not to be very clean, the eye of the Letter is presently filled up—The Pressman then, with his bodkin, turns graver; but with such an unsteady hand, and with so little precaution, that he more hurts than clears the Letter. Had our characters the same depth as those abroad, French Press-work would undoubtedly make a better figure also: but we have had new Founts where the relief part of some Sorts (considered from the center of their hollows) did not answer to above the thickness of ordinary paper for printing—which is a shame!’ And though this, at present, is not the case in England, it may nevertheless be observed, that some of our Roman lower-case founts are not equally fortified to endure the weight

weight of the Prefs, especially in Founts of the leffer fizes, where the a, e, s, w, are worn out before the other forts are injured; which few forts, were they caſt again, and the worn out ones thrown out, would render a Fount ſerviceable for a great deal of good work more.

The next of the principal qualities of good Letter, is, that it be caſt of good metal, fit to wear well at leaſt ſo long as till it has paid for itſelf, beſides good intereſt for its long credit; thereby to eaſe the charges of ſuch forts of Letter as never make a return neither of the principal nor intereſt. This is another great hardſhip upon the Printers in Paris, who are ſerved with very bad metal by their Founders; which, and the ſhort wear they have of their Letter on account of its ſhallowneſs, makes the more ſubſtantial Printers lay out their money in Franekfort, from whence they are ſerved with a better commodity. Notwithſtanding which, the Founders in Paris keep their wonted metal, and alledge, that is of the ſame compoſition with that which is uſed at the King's Founding-houſe; which ſerves not any other but his Maſteſty's Printing-houſe at the Louvre, with ſuſil materials. It would therefore be inconſiſtent with the intereſt of the Founder to caſt Letter for laſting; ſince Letter, at the ſaid Printing-houſe in Paris, is deemed, old and worn, when it has loſt its brightneſs; which, tho' it delights the eyes of ſome, does not pleaſe the Printer, who rather chuſes to ſee new Letter have a gloomy caſt, judging from thence that its metal will prove to be good.

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The Composition of metal for Letter being various, and depending upon the discretion of the Founder, must needs have different effects upon Letter, and render it either more or less servicable. Mr. Moxon has been so generous as to particularize the species and the quantities which *he* used to make Metal of; and accordingly 28 *lb.* of Metal required 25 *lb.* melted lead, mixt with 3 *lb.* of iron and antimony melted together. But in Germany they use more than three ingredients to their Metal; which is there made of steel, iron, copper, brass, tin, and lead: all which they incorporate with each other by means of antimony. This Metal, if duly prepared, does not bend, but breaks like glass: it is harder than tin and lead; something softer than copper, and melts sooner than lead. This account I have of Mr. *Struke*, a Printer at Lubec, who did cast, for his own use, not only large-sized letters for titles, but also a sufficient quantity of two-lined English, after a peculiar manner, by cutting his punches on wood, and sinking them afterwards into leaden Matrices; yet were the Letters cast in them deeper than the French generally are. How they prepare Letter-metal in Holland, I have not learn'd: but from a certain instance (the narration whercof would require a long digression) I am persuaded that they differ both from the English and the Germans.

Besides the three principal Properties which we have mentioned, the following (like Satellites to *good* Letter) are not undeserving the purchaser's examination; who ought to take notice,

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1. Whether the Letter stands even, and in Line: which is the chief good quality in Letter, and makes the face thereof sometimes to pass, tho' otherwise ill-shap'd.
2. Whether it stands parallel; and whether it drives out, or gets in, either at the head, or the foot, and is, as Printers call it, *Bottle-arsed*; which is a fault that cannot be mended but by rubbing the whole Fount over again.
3. Whether the thin lower-case Letters, especially the dots over the i and j *come* in casting.
4. Whether the Break is well ploughed away and smoothen'd.
5. Whether it be well scraped, so as not to want rubbing down by the Compositor.
6. Whether each Letter has a due Proportion, as to thickness; and whether they are not so thin as to hinder each other from appearing with a full face; or so thick as to occasion a gap between Letter and Letter.
7. Whether it be well bearded: which Founders in France are obliged to, to their own disadvantage, on account of their shallow Letter.
8. Whether it have a deep and open single, or double Nick, different from other Founts of the same Body, and in the same Printing-house.

In this last article both the Dutch and French act a little ungenerously; by putting a very narrow and shallow Nick to most of their Letter: and the French, to be more particular, put the Nick on the back of their Roman Letter.

S E C T. II.

Of Italic Letter.

AS Roman characters owe their Invention to the ancient Romans, so have Italic Letters the learned *Aldus Manutius* for their author; who was a Roman by birth, and who in the year 1490 erected a Printing-house in Venice; where having abolished the Letter which resembled the writing of Monks, and introduced Roman Types, of a much neater cut, invented that beautiful Letter which we and several other nations call *Italic*; though the Germans, and those who join with them, shew themselves as ungenerous in this instance, as they do with respect to Roman; for they give Italic Letter the name of *Curſiv*; whereby the memory of its original descent is stifled. In the beginning it was called the *Venetian* Letter, by reason that Manutius was settled at Venice, when he brought his new-invented Letter to perfection; which not long after was dedicated to the State of Italy, thereby to prevent the disputes which might arise if any other nation should venture to claim the priority of it; as was the case about the first Invention of Printing.

The chief, and almost only use for which Italic was originally designed, was to distinguish such parts of a book as may be said not to belong to the Body thereof, as Prefaces, Introductions, Annotations, congratulatory Poems, Summaries, and Contents: all which sub-parts of a Work were formerly made a rule to be put in Italic; whence it was that at least two fifths of a

Fount of Letter were Italic. At present this Letter is used more sparingly, since all the adjunct parts of a Work may now be very properly varied by the different sizes of Roman, were there even no Italic at all: and to plead the necessity of Italic to distinguish proper names of Persons and Places, would be altogether puerile, and argue, that the present age is less capable of apprehension than our forefathers, who knew the sense and meaning of words, before Italic existed, and when no other but one sort of Letter served for Title, Body, and all the other parts of a Book.

That Italic Letter was not designed to distinguish proper names in, nor for several other uses which it now serves, might be readily proved, even from works which have been printed in England; where several have thought it a contrast to deprive Roman Letter of its own beauty, by loading it with Italic words and terms of common signification and meaning; and have thought it inconsistent to intermix Letter of an erect position with that of an oblique inclination.

What Roman Letter suffers by being interlarded with Italic, is of equal prejudice to *this*, when it is invaded by the former—For Roman being always of a bolder look than Italic; of the same Body, takes advantage of the soft and tender face of Italic; which, throughout all its sizes, is now in England of such a beautiful cut and shape as it never was before. What pity then that two such significant Faces as Roman and Italic are, and of which neither stands in need of the other, should sometimes be maimed in such a manner

ner as not to be known which of the two has the advantage of the other. It is therefore to be wished, that the intermixing Roman and Italic may be brought to straighter limits, and the latter be used for such purposes as it was design'd for; viz. for varying the different Parts and Fragments, abstracted from the Body of a work—for passages which differ from the language of the Text—for literal citations from Scripture—for words, terms, or expressions which some authors would have regarded as more nervous; and by which they intend to convey to the reader either instructing, satyrizing, admiring, or other hints and remarks: whereas others, again, would not chuse to follow that method, fearing that their works should be thought to have been printed in a house where, for want of Roman, they had recourse to Italic.

Tho' 'tis in vain to expect that the use of Roman or Italic will be restored to its former purity; yet may it be hoped that their parading so *very* promiscuously may be prevented, or, like the Old Style, abolished, when, upon examining into the merits of these observations, some may join with us in the opinion, that mixing the said two species of Letter on account of proper names, whether of persons or places, ought to be avoided as well in profane Works, as it is in Holy Scripture. Which might be effected with the less difficulty, were Printers themselves to shew their dislike to it, and at the beginning of a Work give directions concerning proper names, and the placing of capital Letters, before the Compositor falls into the common road of both. But to prevent the trouble, as well as expence, which
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would ensue upon an Author's insisting to have his work done in an out-of-the-way manner, after it has been begun, it is safest to consult every Gentleman, least some should shew themselves peculiar, rather than conform to the methods which Printers use to grace the work committed to their care.

Were we to trace the beginning of the custom which still prevails in England, to vary *all* proper names, it would require a discourse too prolix to give it here a place; yet, that we may not be altogether silent upon this head, we will make the following conjectures, by observing, that when Roman Letter became to be established, the Germans made use of it among their Characters, for proper names, and such words as are sometimes entire Latin, and as they are fond of to intercalate into their language. But if this has given the hint to the English to vary *their* proper names, it may be said in favour of the former, that the loss which their Characters have sustained in their aspect, by being intermixt with Roman, is far less than what that Letter suffers when interlarded with Italic; the German and the Roman being both of a parallel position, but Italic, of an oblique inclination—Add to this, that the Germans being apt to latinize most proper names, and to express them according to the same rules as in a latin discourse, by their varying them own, that such names and words have the genius of a different language; which cannot be said of proper names in the English, where they are not subjected to that affected way of latinizing them, before they present themselves in latin works. But if this
conjecture

conjecture will not pass, I desire leave to offer another; and to suppose, that the varying of proper names may be owing to the fancy of some Author of a work which abounded in proper names, either of persons or places, more than ordinary, and therefore ordered them to be distinguished by different characters from the Text, thereby to save himself the trouble of reading the Body of the Work over again, when he should have occasion to make an Index of the names contained in the matter: or else, to make the names in the Index to be found readily in the Text, where they would shew themselves more conspicuous to the Reader on account of their being put in different characters. And that such a contrivance may have afterwards been look'd upon as an improvement; or the Printer may have supported the same, to make use of his Italic, seems not altogether improbable, tho' I have no vouchers for what I have suggested.

In the mean time, and as I have before declared; Italic discovers a particular delicacy, and shews a mathematical judgment in the Letter-cutter, to keep the Sloping of that tender-faced Letter within such degrees as are required for each Body, and as do not detriment its individuals. But this precaution is not always used; for we may observe that in some Italics the lower-case *g* will not admit of another *g* to stand after it, without putting a Hair-space between them, to prevent their pressing against each other: neither will it give way to *f* and the ligature *fl*; and therefore a round *sz* is cast to some Italic Founts, to be used after the letter *g*; but where the round *sz* is wanting,
an

an *st* in two pieces might be used without discredit to the work, rather than to suffer the long *ſt* to cause a gap between the *g* and the said ligature. The like separation may be observed where *g* stands before *j*, *p*, and *y*, in the same word. To remove, therefore, these inconveniences, which the Italic *g* seems to have occasioned equally in France, the Manager of the King's Founding-house at Paris caused a *g* to be cut of such a length and turn as yielded to the inclination of those letters which before were hindered from their close joining the *g*. But these are not only the interfering letters; for some of the Italic Capitals are of the same troublesome nature, and suppress the appearance of certain lower-case letters; of which we shall take notice, when we come to speak of Kerned Letters.

Before we proceed to the next Section, let it not be thought impertinent to conclude the subject matter of *this*, with observing, that Italic Letter not being exposed to the same injuries which the Roman is apt to receive, by being more constantly used; Printers, in foreign parts, sometimes, make one Fount of Italic serve for two of Roman, by casting such lower-case sorts over again as they observe to have been blunted on account of their more tender face; which generally happens to *e*, *o*, and *s*—And that, in chusing their Letter, they are not confined to have Roman and Italic cast by the same Founder, but where they find the one or the other to please their fancy best.

S E C T. III.

Of Black Printing Letter.

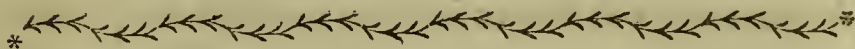
BLACK Letter, which is used in England, descends from the Gothic characters; and is therefore called *Gothic*, by some, and *Old English* by others: but Printers give it the name of *Black Letter*, because its Face, taking in a larger compass than Roman or Italic of the same Body, the full and spreading strokes thereof appear more black upon paper, than common. At present Black Letter is so far abolish'd *here*, that it is seldom used in any other matter than what belongs to Law, and more particularly to Statute Law. It is therefore possible that Black Letter, in time, may become altogether disregarded, as well as its parent, the Gothic, which in the primitive time of Printing was the established character, and prevailed against the Latin; which had been first introduced in Spain, by Alphonfus VI. 1080; when that Prince put an end to writing in Gothic characters throughout his dominions. Neither needs the extinction of Black Letter be much lamented by Printers, to whom it is more chargeable than Roman, or Italic, on account of the extraordinary quantity of ink which it requires; whereby the best-colour'd paper receives a yellow hue, and becomes unsightly.

Black Letter, again, is sometimes used with Roman and Italic together, to serve for matter which the Author would particularly enforce to the reader; and in

E

that

that case, the Text being Roman, proper names are put in Italic. But this way of intermixing three sorts of Letter, not being countenanced, on account of the great disparity between their Faces, may be said to be the reason that several Houses are without Black Letter at all, tho' well provided with other good, and more useful, Printing Materials. Lastly, Black Letter is sometimes used, instead of Printing, in Red, what is designed to be made more conspicuous than common.



C H A P. II.

Of the different Bodies and Sizes of Printing Letter.

THE several Bodies to which Printing Letter is cast in England, are 19 in number, of this order; viz. 1 French Canon. 2. Two-lines Double Pica. 3. Two-lines Great Primer. 4. Two-lines English. 5. Two-lines Pica. 6. Double Pica. 7. Paragon. 8. Great Primer. 9. Primer. 10. English. 11. Pica. 12. Small Pica. 13. Long Primer. 14. Burgeois. 15. Brevier. 16. Minion. 17. Nonpareil. 18. Pearl. 19. Diamond. All which Sorts of Letter may be best divided into Letter of Regular, and of Irregular, Bodies.

S E C T. I.

Of Regular-bodied Letter.

THE class of Regular-bodied Letter takes in, viz. Great Primer, English, Pica, Long Primer, Brevier, Nonpareil, and Pearl: but to those which go before them, viz. French Canon, Two-lines Double Pica, Two-lines Great Primer, Two-lines English, Two-lines Pica, and Double Pica, we will give the name of Title-Letters; considering that the first three sorts are used in Titles of Books, and in Jobbs, only, to make emphatical words or lines appear more conspicuous. And as to the three other sizes, they are mostly used in Heads, and for Jobbs; tho' they, and even Two-lines Great Primer, sometimes serve for short Dedications, or Prefaces, to works of a large size.

Among the Title-Letters, Two-lines Pica being looked upon as a Letter of general use, and very apt to be mixed with Double Pica, but few Printers are fond of it; especially as they find that the difference betwixt Two-lines Pica and Double Pica, as well in Face, as Body, is but inconsiderable; and that of the two, the latter is fittest for Poems, Prefaces, and other introductory parts of a Work.

That *Double Pica* is not the right name for *that* Letter, no Printer will disown, because its depth answers to Two-lines Small-pica, and ought, for that reason, more properly to be called *Double Small-Pica*. Which gives us room to suppose, that the same Letter which now answers to two lines of Small Pica, has been also

cast to the depth of two-lines of Pica; but, being judged too small-faced for that size, it has been reduced to two lines of Small Pica. But Mr. Caslon has revived one something larger than his Double Pica, in having cut a Letter to be cast to the size of Two-lines Pica.

S E C T. II.

Of Irregular bodied Letter.

THE several sorts of Irregular-bodied Letters are, Paragon, Primer, Small Pica, Burgeois, Minion, and Diamond. We call them Irregular, because they are of intermediate sizes to Letter of Regular Bodies; a standard for which, no doubt, was fixed by former Printers, and Founders,

The Primer is a size, answering to Two Brevier Bodies, which, with the Diamond, are very beautiful sizes, and are cast by Messrs. *Fry and Sons*.

What has been mentioned about Two-lines Pica, may be equally said of Paragon, and the rest of Irregular-bodied Letter, viz. That they may be spared in a Printing-house, well provided with such Materials of Regular Bodies: for none can well plead their necessity, but such as are sure to reap a benefit from being furnish'd with them. For the rest, Irregular-bodied Letter is apt to cause confusion in a Printing-house; and is therefore the less countenanced by most Printers. But because Irregular-bodied Letter of the smaller sizes sometimes serves the ends of proprietors of standing and selling Copies, this seems one reason that it has been attempted; otherwise the sizes of

of Printing Letter would not perhaps have been carried lower than Brevier—a Letter small enough to injure the sight, without the help of Nonpareil, and Pearl, tho' both of the class of Regular-bodied Letter.

Among the Irregular-bodied sorts of Letter, none has taken so great a run as Small Pica; and very considerable Works have been done in that character; such as Chamber's Dictionary, the System of Geography, the Universal History in 8vo, and several other books of consequence. It is a Letter, indeed, which was not much taken notice of, before it appeared in the Cyclopædia; but it has raised its reputation ever since, and is now become the favourite character to do voluminous Works in; partly, because it is a round and legible Letter; partly, because it takes in considerably more matter than Pica—the very best size for Printing Letter. In the mean time the purchasers of Works printed in Small Pica have the advantage; for they have more than an adequate value for their expences, especially if the matter is useful and entertaining.

S E C T. III.

Of the Difference of Sizes in Letters.

TH O' all Founders agree in the point of casting Letter to certain Bodies, yet, in the article of casting each Body always to one and the same Size, they differ; insomuch that not only Founders of different places, but of the same residence, and even each in particular, vary in the Height and Depth; both which
seem

feem rather to have increased: but whether the Founder (to make his Letter more weighty,) or the Printer, (to grace it with more distance between the lines) has occasioned this digression from the former Sizes, we shall not scrutinize; but only suppose, that it commenced with the time when Printers here were obliged to furnish themselves with good Letter from abroad.

That the Size of each Body of Letter was fixed, and unalterably observed, by our former Letter-Founders, seems to be out of doubt; else the ingenious Author of Mechanic Exercises would not have given us a Table of the Sizes of Letter, in *his* time, without reservation. In order, therefore, to see the difference between the depth of Letter in Mr. Moxon's time, and that which is cast at present, we will insert this Author's own Table of Sizes, in which he has carried the number of m's, or (which is equally the same) lines of matter of each body of Letter, to the length of 12 Inches, or a Foot; which we shall observe in our Counter-Table, similar to Mr. Moxon's. Accordingly the said Author observed, that, in his own time,

Pearl - - - - -	} contained {	184	m's, in a Foot.
Nonpareil - - - - -		150	
Brevier - - - - -		112	
Long Primer - - - - -		92	
Pica - - - - -		75	
English - - - - -		66	
Great Primer - - - - -		50	
Double Pica - - - - -		38	
Two-lines English - - - - -		33	
French Canon - - - - -		17 $\frac{1}{2}$	

These are all the Bodies of Letter that are specified by the above Author: from which it appears, that in his time, Printers were not encumbered with so many different Founts as they are at present; for now we count nine sorts of Letter more than are exhibited in the preceding Table, viz. Diamond, Minion, Burgeois, Small Pica, Primer, Paragon, Two-lines Pica, Two-lines Great Primer, and Two-lines Double Pica. Accordingly, if these nine sorts had *then* existed, Mr. Moxon would not have failed to mention them, as he does Small Pica; concerning which, he says, ‘We have one Body more which is sometimes used in England, that is, a Small-Pica: but I account it no discretion in a Master Printer to provide it, because it differs so little from the Pica, that unless the workmen be more careful than they sometimes are, it may be mingled with the Pica, and so the beauty of both may be spoiled.’ Hence we may guess what little regard was had for that *one* irregular-bodied Letter, Small Pica; by not giving it a place to be mentioned among the rest, in the

Table

Table.—How much less value, therefore, would Mr. Moxon set upon our Minion, Burgeois, and Paragon, were he to see them ! But, that we may draw nearer our promise, we will first compare the depth of the nine additional sorts of Letter, proportionable to the Sizes in the above table, and then give the Sizes of all the Bodies of Letter which are now extant.

Diamond, then, whereof two lines answer to the depth of one Burgeois, would, according to Mr. Moxon, have required 200 m's, or lines, to the length of one Foot.

Minion, which has Burgeois for its Two-line Letter, would have required 132 m's.

Burgois,	—	—	100
Small Pica,	—	—	76
Primer	—	—	56
Paragon,	—	—	46
Two-lines Pica,	—		$37\frac{1}{2}$
Two-lines Great Primer,			25
Two-lines Double Pica,			19

Thus would the Sizes of these nine sorts of Letter have run, had they been cast One hundred years ago. —And now we have reduced them to the standard which they had at that time ; here follows our Counter-Table, which will shew how far our *present* Sizes of Letter differ from the *former*.

*A TABLE of the present sizes of Letters, as cast in
Messrs. FRY, and SONS' Foundry.*

French Canon	—	Contains m's, in a Foot,	18 and a Gr. Pr.
Two-lines Double Pica			20 and $\frac{3}{4}$.
Two-lines Great Primer			25 and an n.
Two-lines English	—		32
Two-lines Pica	—		35 $\frac{3}{4}$.
Double Pica	— —		41 and an n.
Paragon	— —		44 and an n.
Great Primer	— —		51
Primer	— —		56 and a space.
English	— —		64
Pica	— —		71 and an n.
Small Pica	— —		83
Long Primer	— —		89
Burgeois	— —		102
Brevier	— —		112 and an n.
Minion	— —		128
Nonpareil	— —		143
Pearl	— —		178
Diamond	— —		204

This is the state of our Modern sizes of Letter. The Table is drawn up to shew the size which each Body of Letter, here specified, now has; but let us not conclude from thence, that each Fount of Letter is always cast to one and the same size in its Body. Were this the case, we should not take the liberty to say, That whoever was the author of casting Founts of

the same Body to different sizes, has no room to boast that he has improved Printing; but has done so much hurt to it, that the ill consequences thereof would be too many here to enumerate: we therefore leave every judicious Printer, first, to examine the merits of the charge; and then, to join in the verdict; which, we hope, will be given in our favour, after we have proved our assertion by the subsequent Scheme.

A SCHEME, shewing some of the different Sizes to which English and Pica Bodies are cast.

E N G L I S H .

P I C A .

Frys.	Caflon.		Frys.	Caflon.
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm
mmmm	mmmm		mmmm	mmmm

From this sketch it may be easily guessed, that the like variation which appears here in English and Pica, prevails also in Founts of other Bodies. How apparent, then, is the harm and confusion which the differing in the size of *Letter of the same Body* is able to produce! and that therefore it ought to be made a law, That each of the different Bodies of Letter should *always* be

be cast to *the SAME Height, Depth, and Line*; by Letter-Founders of the same place, *at least*. But whether such a reformation would be chearfully made by Founders, is a question, unless they were urged to it by a joint agreement of the most considerable Printers, who always are furnished with more than one Fount of the same Body; and who consequently run the greater hazard of having the Letter quite destroyed, if Sorts of one Fount should be made use of in another which is not of the same size. As ocular, therefore, as the mischief is, which arises from different sizes to the same Body of Letter, so demonstrable is the reciprocal benefit which would result to Printer and Founder, from casting each Body of Letter to one and the same size. The latter, then, would have no occasion to be at the expence of so many different Moulds—The more current Founts might always be casting and dressing, because they would suit every one who should have occasion for a fount of them; and, by keeping a Fount-case, contrived for that purpose, and always supplied with Sorts, Printers might be instantly served with what they should want, without borrowing, and being afterwards at the trouble of picking the identical Letters out again, on account of being of a different size with the Fount in which they served upon an emergency. Another advantage would be found, when a Printing-house should happen to be sold, that the Letter of it would stand with another Fount of the same Body, to be used either by itself, or to be mixed, provided they should agree together, as to wear.

Thus, by stating the conveniencies which would arise from an uniformity in casting each Body of Letter to the same fixt size; it will be needless to particularize the contrary effects; since, without much speculation, every one may guess, of what detriment it must be to a Printing-house which has several Founts of the same Body; but which all differ in their Sizes — The consequence must be, that the length of Pages (tho' of the same number of lines) as well as of Furniture, will vary according to each size: neither will Rules, Leads, Reglets, &c. cut to any number of m's of one Fount answer to a measure of the same number of m's of another Fount, which is either deeper or shallower in size. Nor is it possible to prevent Letter from mixing, which is cast in the same Matrices, and which has hardly any difference in the Nick. These are some of the unavoidable consequences which arise from having different Founts of the same Body, but not of one and the same size. The reasons, therefore, which are given in defence of this irregularity, ought rather to be regarded as subterfuges, to support an argument which may be quashed, without leaving it to the approbation of a professed Printer.

To have regard that the Face of Letter be proportionable to its Body, is the Letter-cutter's province: I am therefore of opinion, that the different sorts of Irregular-bodied Letter owe their existence to accident; and suppose, that a Letter may have been cut, the Face whereof happened to prove too large for one of the regular-bodied Sizes, and too small for another; and that therefore the Founder used the expedient of
 casting

casting it to an intermediate Body, which we will suppose to have been Paragon: and this turning out a handsome Letter, the Founder, no doubt, recommended it, as an improvement, to some good Printer, who had the complaisance to allow the Founder to be the best judge in this case. And this accident might lead the way to the thrusting Intermediate Letter in between Regular Bodies—Hence we have, between Pica and Long Primer, *Small Pica*; between Long Primer and Brevier, *Bourgeois*; and, between Brevier and Nonpareil, *Minion*. Of *Paragon* it may be further observed, that it was cast, to be the intermediate Letter between [real] Double Pica and Great Primer; till, Small Pica coming in, the real Double Pica (as has been said already) was reduced to a Two-line Letter of Small Pica; and real Double Pica, or Two-lines Pica, substituted by a new Letter, cut on purpose. For the rest, Paragon is a Letter which is not met with in many Printing-houses, neither abroad, nor here, where it has been lately introduced, and will soon have a place among the other Beauties in Messrs. Fry's Specimen of Letter.

What Irregular-bodied Letter is particularly to be admired for is, that each has been cut *here* purposely for their respective Bodies; whereas in France their *La Philosophie*, or Small Pica, is cast in the identical Matrices of *Cicero*, or Pica; their *Gaillarde*, or Bourgeois, in those of Long Primer; and their *Mignone*, or Minion, in the same as Brevier—So that the cutting of Punches for three sorts of Regular-bodied Letter, serves *there* for as many of Irregular Body:

A saving way, similar to this, was attempted by Mr. Jallefon*; who from three sets of Punches proposed to cast six different Boides of Letter, viz. Brevier and Long Primer, from one set—Pica and English, from another—Great Primer and Double Pica, from a third set of Punches. Accordingly, he charged his Brevier, Pica, and Great Primer, with as full a Face as their respective Bodies would admit of; and, in order to make some alterations in the advancing Founts, he designed to cut the Ascending and Descending Letter to 'such a length as should shew the extent of their different Bodies. But tho' he had cast Founts of the three minor sorts of Letter, he did not bring the rest to perfection.

* He was a Letter-founder, from Germany, and lived in the Old Bailey; where he printed the greatest part of an Hebrew Bible, with Letter of his own casting; but was by adverse Fortune obliged to finish the said Work in Holland.



C H A P. III.

*Of a Fount of Letter, considered in the same order
as with Letter-Founders.*

A Fount of Roman Letter, of what Body or Weight soever, is constituted of *Sorts*; which are always these, viz.

1. Lower-

1. Capitals, viz. A B C D E F G H I J K L M N O P
Q R S T U V W X Y Z Æ Æ.
2. Small Capitals, viz. A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z Æ Æ
3. Lower-case Letters, viz. a b c d e f g h i j k l
m n o p q r s t u v w x y z &c.
4. Double Letters, viz. fi fl ff ffi ffl fi fl ffi ffl fb fk
fh ft et æ œ.
5. Figures, viz. 1 2 3 4 5 6 7 8 9 0.
6. Points, viz. , ; : . - ? ! ' [] () * + † ‡ § ¶ ||.
7. Four sorts of Spaces.
8. *m* and *n* Quadrats.
9. Three sorts of Large Quadrats.

These are the ordinary Sorts which are cast to a common Fount of Letter; and which, by Founders, are divided into Long Letters, Short Letters, Ascending Letters, Descending Letters, and Kerned Letters.

S E C T. I.

Of Long Letters.

LONG Letters are those which take up the whole Depth of their Bodies, and are both Ascending, and Descending: such are, in the Roman, the Q and J; but besides these two Capitals, the Italic has, *f* and *f* for Long Lower-case Letters, and *fi fl ff ffi ffl fi fl ffi ffl fb fk fh ft* for long Double Letters.

S E C T. II.

Of Short Letters.

SHORT Letters are all such as have their Face, generally, cast on the middle of their square Metal, by Founders called *Shank*, they are the following, viz. a c e m n o r s u v w x z æ œ; which will all admit of being bearded above and below their Face, both in the Roman and Italic.

S E C T. III.

Of Ascending Letters.

Ascending Letters are, all the Roman and Italic Capitals, and Double Letters, except æ and œ; and among the lower case are found b d f h i k l f t &, except that in the Italic the Double Letters, the Capitals Q and J and lower case f and f are denominated Long Letters.

S E C T. IV.

Of Descending Letters.

Descending Letters are, viz. g p q y j, both in Roman and Italic. Ascending Letters, when they happen to stand under Descending Letters; sometimes damage each other; which Compositors should prevent, by shifting the Spaces accordingly.

S E C T. V.

Of Kerned Letters.

Kerned Letters are such as have part of their Face hang over, either on one, or both sides of their square Metal, or Shank. In the Roman, *f f j* are the only kerned Letters; but in the Italic, *d g j l y* are kerned on one side; and *f* and *ſ*, on both sides of their Face.

Kerned Letter being attended with more trouble than other Sorts, Founders are sometimes sparing in casting them; whereas they rather require a larger number than their Casting-Bill specifies; considering the chance which Kerned Letters stand, to have their Beaks broke, especially the Roman *f*, when it stands at the end of a line, where it is exposed to other accidents, besides those from the lie-brush: but in still more danger are Kerned Letters of the Italic; especially *d f l*, when they stand, with their Beaks ungarded, at the end of lines; and at the beginning of lines, *f g j ſ y* run a great hazard; though of these, *f* and *ſ* in particular are most liable to suffer.

Most Italic Capitals are kerned on one side of their Face; but none ought to be more looked after than *A T V W*, that the angle of the *A* may not fall upon an Ascending Letter that should stand next to it; likewise, that *T* and *W* may admit of an *h*, and *V* of an *i*, after it.

The kerning of Letters, it must be owned, may serve many good purposes; of which the following are not altogether undeserving of being mentioned, viz.

1. In Mathematical and Algebraical Works, where Letters, Figures, &c. are expressed according to the signification which they have either over, or under them; and which might be put more safely over or under kerned characters, than be justified to them; whereby the composing of Algebra would be rendered more easy, and the work itself receive a more solid look.

2. In Etymological Dictionaries, the Vowels as well of large as of small Capitals, might be kerned, to make room for the accent which governs the Pronunciation of a word; whereby the separation which the Acute makes between letter and letter, would be prevented; and the odd look removed, which Capitals make with common accented letters amongst them.

3. In large characters, such as Double Pica, and upwards, the five Vowels might likewise be kerned: and a few Acutes, Graves and Circumflexes [of an inverted v] cast to the body of such Vowels; which would answer the whole class of accented letters, and leave room for twelve boxes, to contain more circulating Sorts.

4. In Hebrew, one Alphabet kerned on one side; and another kerned on both sides; with Vowels, cast in the nature of Greek Accents, would make room for the proper Vowels to be put under Consonants,

more

more readily than by justifying them in separate lines, to their places. But kerned letters will not afford proper room for Vowels and Accents too; and therefore the said Accents are justified over and under the respective places where their quality is expressed.

That some former Founders have been more liberal than others in kerning of letters, appears from their care which they have shewn in preventing the Italic Capital *A* from causing a gap, where it is preceded by a Capital letter which is not kerned, but more particularly when it stands after a *P*; from which the *A* separates itself more perceptibly than from any other letter. To forward them, therefore, in their approaching each other, the *P* is kerned, that its propensity may cover the back of the protruding angle of *A*.—An instance of this circumspection in the Founder, I have but lately discovered in the Two-line Double Pica Italic, which, as well as the Roman, was cast at Oxford.

These are the five Classes into which the Letter Founders divide the Sorts of a Fount, without including Small Capitals and Accented Letters; because they are not always cast with the Fount, but only when the Printer gives orders for them on purpose.—And here indeed we might conclude our observations upon the said five Divisions, were we not apprehensive, that we should be interrupted in our Typographical review. We therefore add two Sections more; in one, to speak of Double Letters; and in the other, to exhibit a Table, shewing the number which are

cast of each Sort comprehended in a common Fount of Roman Letter.

S E C T. VI.

Of Double Letters.

DOUBLE Letters are, æ œ ſt ſt w; which, tho' they are the only Ligatures that have been thought fit to be preserved; and tho' the last of them has been long since received into our Alphabet: yet are they not always suffered to be used in a piece, because some peculiar Authors, either from an insatiable thirst after Antiquity, or else, to shew themselves superlatively curious, chuse to have them set in separate letters; whereby the Printer is put to the expence of having such Sorts cast in single letters as are contained in the above Ligatures.

To the same whim of setting aside the few Ligatures, the Contraction & is likewise obliged to yield; and to suffer its comely figure to be supplied by the single letters e and t. The other double letters are contrived,

1. For a KERNED letter to stand with a KERNED letter; as ff fl.
2. For KERNED letters to stand with ASCENDING letters, as fl ffl sb sh sk sl.
3. For KERNED letters to stand with the DOTTED letter i, as fi ffi si ssi.

The

The Dutch make a regular Sort of fl, and cast it up to a large number, tho' the English Idiom does not require it at all. But why the Dutch thrust this uselefs Sort in, may perhaps be, to observe Uniformity, to have a double fl as well as a double f; for it can hardly proceed from any other reason; tho' upon taking notice of the abundance of thick Sorts which are left, after a Fount has been set up as far as it can, one might suppose that their superfluity is from a different motive—Well, therefore, the Dutch did not think of fb and fk, before we had them from Mr. Caslon, else they would have loaden us with these two (immaterial) Sorts, to make the more of their metal.

As to other Double letters, such as *fr ra ta*, and several besides, with which Italics used to abound, they were formerly cast in a piece, on account of that separation which appears between letter and letter of the above Ligatures; which are now justly thought undeserving of a place in our Cases; as they would be but buried, and no more remembered than the Ligatures *as is us*; which tho' they are still cast in one of our Double Pica's, ought, for the said reason, to be omitted, and regarded as uselefs; or else, on their arrival, be flung into the Metal-basket, without giving them a place which may be taken up with more useful sorts; for, that the three last mentioned Ligatures are cast in waste, may be concluded, from their being no allowance made for them in casting a less number of single letters as are contained in double ones; besides, *i u s* being Latin Sorts, they are generally cast to such a quantity as need no helping-out from Ligatures.

S E C T.

S E C T. VII.

Of the Number of each Sort that is cast to a Bill of Pica Roman.

THIS Head might be carried to a very considerable length, were we to enter upon the Genius of Languages; or even upon those which make a figure in Europe. But as this would be an undertaking too difficult to one who is not a Linguist, nor pertinent to our pursuit; we will content ourselves with taking notice of our own Idiom, as far as it relates to the Sorts which it requires; which will afford us an opportunity to touch upon such neighbouring languages as are often seen to proceed from the Presses in England. We confess, indeed, this to be a subject which cannot be treated with certainty; yet as others before us have endeavoured to make a computation of what number each Sort is to consist, in a Bill of Pica Roman, we hope to give no offence if we offer to try, whether the Calculation before us will not admit of some alterations, by enlarging the number of some Sorts, and by lessening the quantity of others; especially as we would endeavour to adapt our Counter-Bill to the English language particularly; thereby to try, whether a Fount of Letter would turn out more perfect than it sometimes does: which, if it should prove to our wishes, would give the greater satisfaction; as it would answer several good purposes; and especially that of having less occasion for imperfections, which often prove very hurtful to

a new Fount of Letter: for they are seldom of an identity with the prior Sorts; but differ from them, sometimes in thickness, and sometimes in height to paper, or depth of Body; and sometimes they differ even in the Face, when imperfections are cast in Moulds of the same Body; but not of the same Face: so that, were it not for the eagerness of the Compositor, who winks at such defects, rather than be hinder'd in the pursuit of his business, many a Sort, cast for perfecting, would be returned. In the mean time, *good* Press-work will expose the Faults, and shew where letters are cast either too high, or too low, to paper; and where too thick, or too thin: for if they are too thick, they will bear off, and look as tho' they had Hair-spaces at their sides; and if too thin, they will seem to be jammed in so as to be hindered from appearing. This, perhaps, may not have happened, or rather, not been observed, in Mr. Palmer's time, else he would not have shewn himself so very positive in what he asserts in his History of Printing, page 51; since it is possible, that the same word may measure longer in one place, and shorter in another; for the word will measure longer, if it has letters of Imperfections in it that are cast thicker than the Sorts which were cast with the Fount: and in like manner it is possible that the same word may measure shorter than the other, if it has letters in it that are cast thinner than the prior Sorts, tho' these, as well as the Imperfections are cast in the same Mould. And as to maintaining, that the length of one Page cannot exceed the length of another Page, of the same number
of

of lines, and of the same Body, our Scheme of Sizes in English and Pica Bodies, will demonstrate the possibility of that : for it is not uncommon in large Printing-houses to employ more than one Fount of Letter in the same Work, which, tho' they are of the same Face, and goodness, may not be of the same Size ; whence it may happen, that the last page of one sheet may measure either shorter or longer than the first page of another sheet, according to the contrary depths of their different Founts. But, that we may not be thought too busy in our researches, we will, without going further, use the same expedient as we did before, and prove our assertion, by demonstrating the possibility of Letter driving out in one place, and getting in in another, by the annexed Scheme.

A S C H E M E, shewing how Letter may drive out, or get in, as to thickness.

aaaaaaaaaaaa	eeeeeeeeeeee	iiiiiiiiiiiiiiii
aaaaaaaaaaaa	eeeeeeeeeeeei	iiiiiiiiiiiiiiii
oooooooooooo	uuuuuuuuuuuu	mmmmmmmm
oooooooooooo	uuuuuuuuuuui	mmmmmmmm'
<div style="text-align: center;"> constantinopolitanorum constantinopolitanoruma constantinopolitanorumo </div>		

This may suffice, to shew the possibility of a word measuring longer in one place than in another. This specimen is gathered from two Founts, cast in the same Matrices, and justified to stand together, but are not

worn alike. The lower line of each two is of the prior Fount; which tho' it is more soiled than the newer Letter, gets in, notwithstanding. The two lines braced, are of the same Fount, and composed out of the same Cases, without picking or chusing the Sorts: yet as it appears that there is a small difference in the thickness of the same Sorts in *one* word, a greater might be discovered in a long line.



CAPITALS.

To be cast,

			More.		Less.		In all.
A	800	-	50	-	—	—	850
B	500	-	—	-	50	—	450
C	600	-	200	-	—	—	800
D	500	-	—	-	50	—	450
E	800	-	—	-	100	—	700
F	500	-	—	-	50	—	450
G	600	-	—	-	—	—	600
H	600	-	—	-	50	—	550
I	800	-	200	-	—	—	1000
J	500	-	—	-	—	—	500
K	500	-	—	-	50	—	450
L	500	-	100	-	—	—	600
M	500	-	200	-	—	—	700
N	600	-	—	-	100	—	500
O	600	-	—	-	100	—	500
P	600	-	200	-	—	—	800
Q	300	-	—	-	—	—	300
R	600	-	—	-	—	—	600
S	600	-	200	-	—	—	800
T	800	-	200	-	—	—	1000
U	500	-	—	-	100	—	400
V	500	-	—	-	—	—	500
W	500	-	100	-	—	—	600
X	200	-	100	-	—	—	300
Y	500	-	—	-	200	—	300
Z	200	-	—	-	100	—	100
Æ	100	-	—	-	—	—	100
Œ	50	-	—	-	—	—	50
<hr/>							<hr/>
	14350						14950

DOUBLE LETTERS.

				To be cast,			
				More.		Less.	In all.
ft	800	-	-	_____	-	_____	800
fh	600	-	-	_____	-	_____	600
fi	500	-	-	_____	-	_____	500
fi	500	-	-	_____	-	100	400
ff	500	-	-	_____	-	200	300
ff	200	-	-	_____	-	50	150
fl	200	-	-	_____	-	50	150
fl	200	-	-	_____	-	50	150
fl	200	-	-	_____	-	100	100
ffi	200	-	-	_____	-	_____	200
ffi	200	-	-	_____	-	_____	200
ffi	200	-	-	_____	-	50	150
fb	200	-	-	_____	-	100	100
fk	200	-	-	_____	-	_____	300
et	300	-	-	_____	-	150	150
æ	300	-	-	_____	-	100	100
œ	200	-	-	_____	-	_____	_____
<hr/>							
5300				4350			

FIGURES.

1	1200	-	-	300	-	_____	1500
2	1200	-	-	100	-	_____	1300
3	1200	-	-	100	-	_____	1300
4	1000	-	-	100	-	_____	1100
5	1000	-	-	100	-	_____	1100
6	1000	-	-	200	-	_____	1200
7	1000	-	-	100	-	_____	1100
8	1000	-	-	_____	-	_____	1000
9	1000	-	-	_____	-	_____	1000
0	1200	-	-	400	-	_____	1600
<hr/>							
10800				12200			

POINTS.

POINTS.

To be cast,

			More.		Less.		In all.
,	4000	-	1000	—	—	—	5000
.	2000	-	—	—	—	—	2000
-	1000	-	—	—	—	—	1000
:	1000	-	—	—	400	—	600
;	1000	-	—	—	—	—	1000
'	1000	-	—	—	200	—	800
?	500	-	—	—	100	—	400
!	300	-	—	—	100	—	200
†	200	-	—	—	100	—	100
+	60	-	—	—	—	—	60
*	200	-	—	—	—	—	200
[200	-	—	—	—	—	200
(300	-	—	—	—	—	300
	300	-	—	—	200	—	100
§	200	-	—	—	100	—	100
¶	200	-	—	—	150	—	50

12460

12110

SPACES.

Thick	15000	-	—	—	3000	—	12000
Middle	10000	-	—	—	—	—	10000
Thin	5000	-	3000	—	—	—	8000
Hair	2000	-	—	—	—	—	2000

32000

32000

QUADRATS.

	m	2000		n	5000	
4 m's	40 lb.		3 m's	30 lb.		2 m's 10 lb.

Thus

Thus have we introduced the Bill *. or calculation of the Quantities of the respective Sorts in 500 *lb.* of Pica Roman; which has the name of a *Fount* of Letter, as well as a quantity of 2000 *lb.* or more; but which are distinguished by calling the first, a *Small Fount*, and the other, a *Large Fount*. Our inserting the above Bill has nothing else in view than to submit to Printers as well as Letter Founders, whether the said Bill will not admit of some alterations in the specified quantities of several sorts; so as to make a Fount of Letter turn out more perfect, for *English Matter* in particular. In order to this we have attempted to make an essay of enlarging the above given quantities of some Sorts; and lessening the number of others; yet so, that our total sum of Capitals, Small-letters, Figures, and Points, together, corresponds with that of the first calculator's; as appears by the following scheme,

Lower-case	90,200	—————	89,500
Capitals	14,350	—————	14,950
Double-letters	5300	—————	4350
Figures	10,800	—————	12,200
Points	12,460	—————	12,110
	<hr/>		<hr/>
	1,33,110		1,33,110

* Letter Founders call 3000 Lower case m's a *Bill*, and proportion all the other Sorts by them; so that a whole Bill of Pica Roman makes 500 *lb.*— 1500 m's, or Half a Bill, 250 *lb.*— 750 m's, or a Quarter of a Bill, 125 *lb.*

If we look into the primitive state of Printing, we find that the Professors of the Art were obliged to have large Founts of Letter, on account of Printing their Works in Quires of three, four, and even five sheets; whereas now, a Fount half that force will serve to do business more expeditiously, by printing in single sheets; so that very large Founts are not of equal advantage to every Printer; but only such who print large voluminous Works; considering that the larger the Fount is, the greater are the imperfections: which, were they always to be cast for, would make a Fount enormously large, yet not perfect at last. Neither is it of service to Letter, if one part is kept long out of use, while another parcel is worked briskly round. Sometimes a very large Fount makes negligent Correctors, when they know how far a Fount goes, and therefore give themselves no concern about returning Proofs, till they find that the whole Fount is set up, and that the Workmen can go no farther. In such case the intention of having large Founts is frustrated, and the Compositor as well as Pressman are prejudiced in their endeavours; whereas a tolerable large Fount of Letter, and a *regular* dispatch of Proofs, is beneficial to Master and Men. Yet ordinary Founts will not always suit Printers that are known to be capable of giving Work a quicker dispatch than usual, on account of their being provided with extraordinary Founts of Letter, and employing a number of hands; which, tho' it is attended with very great charges to the Printer at first, makes nevertheless amends for them, provided those heavy Bodies of Letter are always

ways kept in motion. In the mean time every Printer ought to consult with himself about the scope and nature of the business which he sets out for, and have his Letter cast accordingly: for it can hardly be supposed that he who shall have particular occasion for large Letter only should lay his money out upon such Founts as are required for Book-work; which ought to be large and complete, if the owner of them proposes to signalize himself for being furnished with ample materials for expediting work of every kind. A Fount of English, which sat up about twelve sheets in 4^{to} of the Surgeons Case, in Paris, was much admired *there* for its largeness: but, how much would their admiration be heightened, were they to see *here* several Founts larger than that; and one in particular, which sat up above thirty sheets in Folio, of 77 lines long, and 45 m's wide, before Imperfections were cast to it, which must be very considerable, of course, and have enlarged the Fount to several sheets more.



C H A P. IV.

*Of a Complete Fount of Letter, as considered
by Printers.*

I N the foregoing Chapter we have shewn the order into which Founders divide a Common Fount of Letter, cast to be used for ordinary and plain
English

English matter, self-sufficient to explain itself, without the aid of Small Capitals, or even Italic: neither is a common Fount furnished with Accented Letters, for Latin, French, or other Works in foreign languages. It is therefore in vain to load a Fount with such Sorts as are used in other languages in greater numbers than in the English. Thus, for example, c i m p q u, being Latin Sorts, might be more sparingly cast, till the Fount should be employed in some Latin Work: the like might be done to l s v, which are French Sorts; besides p q u, these being great Sorts in Latin as well as in French. In the mean time, and while the Latin and French Sorts are lessened, the number of the principal English Sorts, such as a d e n o r t, might be enlarged, and the Fount thereby made more useful; which we have attempted to shew, in part, in the preceding Bill. But in this Chapter we shall consider a Fount of Letter more typographically, with respect to its Contents, and Appurtenances; and therefore our ensuing observations are upon a *Complete* Fount of Letter, which we will suppose to be of a Pica Body.

A Complete Fount of Letter, then, is composed of the following particulars, viz.

1. Capitals.
2. Small Capitals.
3. Small Letters.
4. Double Letters.
5. Accented Letters.
6. Figures.

7. Points.
8. References.
9. Spaces.
10. Quadrats.

All these different parts of a Complete Fount of Letter, Printers divide into two Classes, viz.

- | | | |
|----------------|---|--------|
| I. Upper Case | } | Sorts. |
| II. Lower Case | | |

The Upper Case Sorts are,

Capitals—Small Capitals—Accented Letters—
Figures—References.

The Lower Case Sorts consist of

Small Letters—Double Letters—Points—Spaces
and Quadrats.

1. *Of Upper Case Sorts.*

S E C T. I.

Of Capitals.

CAPITALS, of what Body soever, if they are discovered to have their fat and lean strokes blended together in a due proportion, make a fine appearance in Inscriptions, Titles, or other matter where their beauty is not invaded by Italic, but where they present themselves in their erect position, by themselves. But their bold and distinguishing aspect is greatly

greatly obstructed by proper names of persons and places being put in *Italic*, so that they would hardly have a chance to shew themselves, were it not for their being put at the front of Nouns substantive, to distinguish them from Verbs, Adverbs, or other parts of Grammar. But that their noble figure was not designed for that pedantic purpose, may be conceived from their being variously used, 'according to the choice of authors: for tho' some give themselves no concern about capitaling, but leave that to the Printer's discretion: yet there are others who shew themselves more acquainted with Printing; and, in order to avoid intermixtures of Letter, of their own accord distinguish no Substantives by Capitals, but prefix them to names of persons and places, also to titles of honour and eminence; whereby such words, being graced with Capitals, shew themselves more neatly than they would have done in *Italic*. Still other Authors chuse not only the foregoing method, but also denote their emphatical expressions, by beginning them with Capitals, whether they be of the substantive kind, or otherwise. In such case it would be kind in Gentlemen, to put some mark to the emphatical words in their copy, and either underscore the first letter of such a word, or make some other token, which may inform the Compositor of an Author's intention; since otherwise it will be difficult for the former, in the pursuit of his business, to lay a stress upon the same word with the Author, especially if the copy is written in the common way, viz. with Capitals to Substantives, or else without any method at all. The loss of time, and consequently

of gain, which the Compositor sustains by not having the emphasis of words pointed out to him, till in the Proof-sheet, is often very considerable; and takes away a good Workman's credit besides, who has taken care to space his matter well; but which seldom gets any advantage by alterations; especially in works of small size, and large characters, where some Capitals make a great alteration, and sometimes occasion the over-running of several lines, before their driving out can be recovered.

Words, or Matter, which are to be set in Capitals, should be written in Capitals in the Copy, or else trebly underscored, in contradistinction of Small-Capitals, which are doubly underscored; and of Italic, which is intimated by underscoring once, what is to be in that character.

Matter in Capital letters has, generally, Spaces put between, which grace them much; but wastes a Compositor's time, especially where proper Spaces are short: which is the reason that the Spacing of Capitals is sometimes dispensed with, in work particularly which admits of no delay. And tho' this passes with Roman Capitals, in Dictionaries, and upon other occasions where they are used in great abundance; yet Italic Capitals must be Spaced, or else they make an aukward and unsightly appearance.

S E C T. II.

Of Small Capitals.

S MALL Capitals are cast, with us, to Roman Founts only; but abroad, Italics have their own Small Capitals: for it would be thought a fault there, by most, to intercept the agreeable sloping of Italic by Roman Small Capitals; and therefore they rather use Capitals, in case small ones are wanting in Italics.

Small Capitals are mostly used to denote, that a more particular stress and emphasis is intended by the Author, on such words and expressions as are distinguished by them—And where they are used in Heads, among Italic, they commonly are made use of for such words as give an item of what the subjoined matter is to treat.

Some are so fond of Small Capitals, that they chuse to have whole verses and sentences set in them; but which, as well as matter in Capitals, is perplexing to the reader, especially in books designed for the comprehension of the meanest capacities,

In open matter, with Leads and White Lines between, the first word of a new paragraph, tho' a polysyllable, is commonly put in Small Capitals; and even if it happens to be a proper name, which some, upon such occasion, put in Italic Capitals, but thereby break thro' the rule of uniformity, to set every first word after a Break in Small Capitals. But this rule may be very
well

well laid aside in matter which is too sententious, and which would take up more Small Capitals than an ordinary quantity of them in a Fount could supply.

In Titles, and upon other occasions, Small Capitals are sometimes made use of for a principal line, where it will not admit of Capitals. But here we do not strictly mean Small Capitals which are cast to their respective Founts; but rather such as are made artificially, by putting an initial letter of a larger size before the letters which are to look as if they were Small Capitals. Thus in Two-lines English, Great Primer Capitals may supply the want of Small Capitals. And thus may Double Pica, or any other Capitals be contrived to resemble Small Capitals, by enlarging the initial letter, in proportion to the [seeming] Small Capitals: but great care must be taken to justify the initial letter, and the Small Capitals, so as to stand exactly in line with each other: which may be done with the more certainty, if what will justify one and the other is first tried by letters whose stems run into a strait line at bottom, as they do in H I M; whereas B C D, and others, turn either off, or have Stem on the left side only, and are therefore not so fit to justify by, to a nicety. And this *making* of Small Capitals may be done in Italic as well as in Roman.

Small Capitals are generally spaced, as well as Capitals, which both take up a Compositor's time; tho', with respect to Small Capitals, the trouble of spacing *them* might be prevented, were they cast so thick as to bear off each other, according to their Bodies, and
according

according to their turn and shape. But here, again, it is to be feared, that if they should be cast too thick, their beauty would be spoiled, instead of adding to it; considering that the distances which are given to Small Capitals by Founders, cannot at all be retrenched, whereas they may be enlarged by the Compositor, upon occasion.

The Small Capitals c o s v w x z, seem in some Founts to be the same with the Lower-case letters, and differ from them only by being cast somewhat thicker: but tho' in other Founts the above Sorts are cut on purpose for Small Capitals, yet they resemble the common letters so much, that they are used as such, when they are wanted in the Lower-case; whereby the said Small Capital Sorts are ingulphed, and common letters advanced to serve in their room. To save, therefore, the said Small Capital Sorts, from descending to supply the wants of a Lower-case, the casting Small Capitals, throughout, with proportionable distances between letter and letter, would be *one* expedient: but if this should not impede the dragging of Upper-case Sorts into the Lower-case, we offer another, which is, To cast the said seven Sorts with a different Nick to them: whereby these wandering Sorts might be sent to their proper home again, by a careful Compositor. But, that I may not be censured for this hint, I aver to have seen, at Dantzic, a fount of Letter, whose Upper-case Sorts had their Nick *all* higher than the Lower-case letters; which, tho' it answers no end at all, may nevertheless serve to support what we have intimated, and what will prove of more consequence.

Where

Where Small Capitals are plenty, they may be used instead of Capitals of their likeness: thus, Double Pica Small Capitals having the Face of English Capitals, may serve for such, in lines by themselves, as C H A P. S E C T.: but, note, that neither the first letter nor the numerals, must be other than Small Capitals.

S E C T. III.

Of Accented Letters.

THE letters which are properly called *Accented Letters*, with Printers, are the five Vowels, marked either with an

Acute,	—	—	á é í ó ú
Grave,	—	—	à è ì ò ù
Circumflex	—	—	â ê î ô û

To these are added the Vowels with two dots, or Diæresis, ——— ä ë ï ö ü

As also the five Vowels with the marks of Short and Long over them, viz.

Longs,	—	—	ā ē ī ō ū
Shorts,	—	—	ǎ ě ĭ ǒ ŭ

And those who call *Accented Letters* all that are of a particular signification, on account of being distinguished by marks, reckon the French ç, the Spanish ñ, and the Welsh ŵ and ŷ, in the class of *Accented Letters*, tho' not Vowels.

I. *Of Vowels marked with an Acute.*

THE five Vowels, marked with Acutes over them, 'tis not improbable, were first contrived to assist the ignorant Monks in reading the Church Service; that by this means they might arrive at a proper and settled pronunciation, in the discharge of their sacerdotal functions; and by thus accenting the vowels afterwards in printed books, make others conform to them in giving words their proper sound: which, tho' it seems to be an ancient institution, is nevertheless still observed, in France in particular, where the vowels in the Latin columns of their Common Prayer books are accented, for no other reason than to support an uniformity in pronouncing *Latin*. This, indeed, is what our Etymological Writers are pursuing to do to the *English*, in their Dictionaries, by placing an Accent over, or next to, the vowel which governs the sound and pronunciation of a word: but because Authors differ in this point, it will be difficult to accomplish their design, unless they themselves first agree to uniformity in accenting, and afterward find out an expedient to establish their joint conclusion: which the French have done most effectually, by accenting the Latin matter in their Mass-books as the most proper vehicle to make the pronunciation of the Roman Church language more universal—An instance not unworthy of imitation, were the like attempted in other nations, particularly in one which differs widely, in point of pronunciation, from its neighbours: and where a Common Prayer, accented by a respectable

Society, or eminent men, would give a sanction to a conformity in accenting, and consequently in pronouncing: which would be of advantage to foreigners, and mortify critics and pedants, who study to make every thing dissertations.

Among the Acuted vowels, the *é* is the most considerable with the French; by whom it is used and abused according to the fancy of the writer; tho' it is confined to rules as well as other letters; and whereof the following are more general. Accordingly the *e* is accented,

1. Where it sounds open and clear, at the end of words, as in *bonté, santé, pitié*.
2. Where it sounds sharp, and the voice is to be raised, as in *prédeceffeur, prédestiné*.
3. In Adjectives of the feminine gender, which end in two *ec's*, as *une maison bien réglée*.
4. In Preterits of the first Conjugation, as *j'ai pensé, j'ai aimé, j'ai désiré*.
5. Where it takes off the sound of the *f* after it, as in *échevin, écaille, écarter, témoigner*, instead of writing, *eschevin, escaille, escarter, tesmoigner*; which is become obsolete.

Thus we find, that besides the *e*, acuted letters are of no use in French Orthography; and none of them in the English; save that the acuted *í ó ú* may, upon occasion, serve in Etymological Dictionaries among Small Capitals, and save kerning them; which, however, cannot be done to *Λ* and *ε*, which *must* be kerned, or else be cut and cast, with an accent over them

on purpose, unless you think it passable to put the accent at the side of a vowel; in which case the former ought to be very thin, especially if Small Capitals are cast to bear off each other.

II. *Of the Vowels marked with a Grave.*

THE *a* marked with a Grave, is used in several other languages, besides the Latin and French, tho' we chuse to confine ourselves, in this Chapter, to these two, as being the principal bye-languages which prove beneficial to our English Presses. Accordingly, the *a* with a Grave is used,

I. In Latin,

1. When it stands for a word, by itself, as *à patre*, *à matre*.
 2. In Adverbs, to distinguish them from Adjectives, or Prepositions of the same termination, as *infra*, *suprà*, Adverbs—*infra*, *supra*, Prepositions.
- è* has a Grave, when it stands for a word, by itself, as *redit è schola*.
- è* *ò* *ù* have a Grave, to distinguish Adverbs and Conjunctions from Adjectives and Prepositions of the of the same termination, as *doctè*, *meritò*, *adversùs*, *secundùm*, Adverbs—*docte*, *merito*, *adversus*, *secundus*, *secunda*, *secundum*, Adjectives—*verò* Conjunction; *vero* Adjective.

II. In French,

a has a Grave in *là*, when it is an Adverb, as *il est logé là*—But *la* has no grave when it denotes the Article of the Feminine Gender; as *la femme*, *la sœur*.

a has a Grave, when it is a Particle before the Dative case, as *j'ai donné à lui, il a dit à lui.*

Also, when it stands before the Infinitive mood, as *facile à faire, propre à manger.*

Likewise when it stands before the names of places, as *il est allé à Paris, il s'en va à Lyon.*

a has a Grave in the word *voilà.*

But *a* has no Grave, where it comes after an *y*, as *il y a un Dieu, il y a des hommes sçavans.*

Neither has *a* a Grave, when it makes a word of itself, but at the same time derives from the verb *avoir*, to have; as *il a bon tems à se promener*; where the first *a* is not accented, because it derives from *avoir*; whereas the other *a* has a Grave, because it stands before the Infinitive mood.

The *e* has a Grave, in words whose last syllable has an open and sharp sound, as in *excès, procès, succès, exprès*, and the Preposition *dès*, to distinguish it from *des*, which denotes the Genitive of the Plural number. But some put an Acute in the above words, instead of a Grave, and allow either to be right.

u has a Grave in the word *où*, where it means *where*, as *où êtes vous?*

But *u* has no Grave when it stands for *or*, as *souhaitez vous de boire du vin ou de la biere?*

Neither has *u* a Grave when it stands for *either*, as *je partira ou pour Paris ou pour Diepe*, I shall go either to Paris, or to Diep.

III. In English,

e is marked with a Grave, in Poetry, to prevent its being taken for the *e* feminine, which, not being founded, would shorten the measure of the Verse, were the *e* not marked to be pronounced; as in these lines, viz.

*Cithæron, Dindymè, in ashes mourn,
And Mycalè, and proud Olympus, shine.
Bæotia for her Dirceè seeks in vain.*

III. Of the Vowels marked with a Circumflex.

THE Circumflex'd Vowels are used in the French more than the Latin language.

I. In Latin,

â and *û* are chiefly made use of.

a is circumflex'd, where it distinguishes the ablative from the nominative case, of the first declension, as *musâ* Nom. *musâ* Abl. unless a Preposition stands before it; which shews the Case without any other sign or distinction.

Also, where the Preterperfect of the first Conjugation is contracted, as *âmasti* for *amavisti*.

II. In French,

a is circumflex'd in *âge*, instead of writing *aage*, which is obsolete.

a is circumflexed, where it retrenches the *s* after it, as *château*, *châtiment*, instead of formerly writing *chasteau*, *chastiment*.

e i o u are circumflex'd, where they have an *f* after them; which they shew to be cut off, by assuming a circumflex; as does

ê in *fête, Evêque, être, êtes*, and many others.

î in *maître, épître, connoître*, &c.

ô in *Apôtre, côte, vôtre*, &c.

û in *brûler, coutume, couteau, soutenir*, &c.

But *f* maintains its place in *pasteur, gestes, distribuer, posterité*; and in all other words where the *f* after a vowel sounds clear and open; and where retrenching it would occasion a vitiated pronunciation.

IV. *Of the Vowels marked with a Diæresis.*

THE Vowels which are marked with two dots, or a Diæresis over them are, properly, but three, viz. *ë ï ü*, tho' *ä* and *ö* ought not to be omitted in casting. Their use is to separate one vowel from another, and to prevent their being taken for diphthongs: but the rules for placing the Diæresis, being as unsettled as many others, relating to Accented letters, we will not presume to fix upon any, but recommend it to Authors, to mark them in their Copy, according to their own, or their favourite Grammarian's fancy; since it is not required of a Compositor, to concern himself about matters that are in dispute among Pedagogues. In the mean time, particular care ought to be taken in Poetical works, not to omit putting the Diæresis where the dividing of two Vowels makes two different syllables; whereas otherwise two Vowels together may be taken

taken for a Diphthong, and make the Verse fall short of its measure; as might have happened to the lines underneath, had no Diæresis been used to prevent it; viz.

The Swans that in Cäyster's waters burn.

In flames Cäicus, Peneus, Alpheus, roll'd.

The Tanäis smokes amid his boiling wave.

V. Of Shorts and Longs.

SHORTS as well as Longs, are invented to shew the Accent, Sound, and Quantity, of syllables. They are chiefly used in Classical Dictionaries, and in Scanning of Latin Verses, after their syllables have been brought into Feet, and marked with Shorts and Longs according to the measure of the Verse. Thus an Adonic verse has two feet—An Hexameter six—A Pentameter five feet; which consist either of two, or three syllables. Two syllables, both long are called a *Spondee*—A foot, whose first syllable is long, and the last short, is a *Trochæus*; and—Three syllables, viz, the first long, and the other two short, is a *Dactyl*.

VI. Of the French ç, the Spanish ñ, and the Welsh ŵ, and ŷ.

THE *c à la queue*, or *c with a tail*, is a French Sort, and sounds like ff, when it stands before a o u, as in *ça garçon*; whereas a common c, before the *same*
Vowels,

Vowels, is pronounced like a k. And to make a tail to a Capital C, a figure of 5, inverted, and of a small size, is not improperly used.

The n marked with a stroke over it, is used in the Spanish, and pronounced like a double n, or rather like ni; but short and quick, as in *España*. It is a fort which is used in the middle of words, but very rarely at the beginning.

In the Welsh language, *ŵ* and *ŷ*, as well as the other circumflexed letters, are used, either to direct the pronunciation, as in *yngŵydd*, in presence; *ynghŷd*, together: or else for distinction sake; as, *mŵg*, a mug; *mŵg*, smoke; *hyd*, to, until; *hŷd*, length.

Thus have we endeavoured, in the briefest manner, to shew the use which is made of Accented Letters; tho' at the same time we could have wished to take less notice of some, and to reckon them among the obsolete Sorts, invented by Scolastics, to inculcate rather than to beat into their pupils the rudiments of Grammar by signs and symbols; for which reason Accented Letters are dispensed with in vocabularies and other books for initiating scholars in languages that still retain the custom of distinguishing the signification and pronunciation of words, by putting a cap over some vowels, and marking others with fore and back strokes. Yet if some Authors should maintain the necessity of Accented Letters, even in Works designed for the learned, they ought to shew it in their Copy, by marking Accents where-ever they fancy them requisite; which should not be left to the Com-

. pōsitor

positor to guess at, who expects to be satisfied for changing Common letters into Accented ones, after the matter has been composed in the usual way, or according to Copy.

S E C T. IV.

Of Figures.

FIGURES are invented to express Numbers by; which is done, either by

Numeral Letters——or by
Arithmetical Symbols.

I. *Of Numeral Letters*

NUMERAL Letters were used by the Romans, to account by; and are seven in number, viz. I V X L C D M. The reason for chusing these letters, seems to be this, viz. M being the first letter of *Mille*, stands for 1000; which M was formerly writ CIO. Half of that, viz. IO, or D, is 500.—C, the first letters of *Centum*, stands for 100.; which C was anciently writ E, and so half of it will be 50, L.—X denotes 10, which is twice 5, made of two V's, one at top, and the other at bottom.—V stands for 5, because their measure of *five ounces* was of that shape; and I stands for 1, because it is made by one stroke of the pen.

If a less number stands before a greater, it is a rule, that the less is *taken from* the greater; thus, 1 taken
L from

from 5 remains 4. IV.—1 from 10, remains 9. IX.—10 from 50 remains 40. XL.—10 from 100 remains 90. XC.

If a less number follows a greater, it is a rule, that the less is *added* to the greater; as, 5 and 1 make 6. VI.—10 and 1 make 11. XI.—50 and 10 make 60. LX. &c.

Sometimes Small Capitals are used for Numerals, in the same manner as the seven sorts of Capitals; and look as well, if not neater, than these last: but we observe that, in dates of years, some chuse to put the first letter a Capital, as, MDCCL. &c. for which they may have their reasons; nevertheless we join with those who disapprove of mixtures in figures; or to make them appear like Nouns substantives, with Capitals at the head of Small ones.

To express numbers by Letters, was not the invention of the Romans, originally, because several nations, anterior to them, did use that method in counting; and the former Romans were particular only in this, that they employed Capital letters to numerate by. But when Printing was discovered, and before Capitals were invented, small letters served for Numerals: which they have done ever since; not only when the Gothic characters were in their perfection, but even after they ceased, and Roman was become the prevailing Letter. Thus, in the time of printing in Gothic characters, *i v x l c d m* were, and are still, of the same signification with Capitals, when used as Numerals. But here it should be observed, that
the

the Capital J is no Numeral letter, tho' the Lower-Case j is as often and as significantly used as the vowel i, especially where the former is used as a closing letter, in *ij iij vj viij viij dciij*, &c. tho' it is as right not to use j's at all, unless it were out of respect to antiquity: for in Roman Lower-Case Numerals, which are of a more modern date, the j is not regarded, but the i stands for a figure of 1, where-ever it is used numerally.

II. *Of Arithmetical Figures.*

ARITHMETICAL Figures are nine in number, besides the Cypher, or Nought, which, tho' of itself it is of no signification, makes nevertheless a great increase in the figure to which it is joined, either singly or progressively.

Figures require a Founder's particular care to cast them exactly n-thick, and true parallel, not driving out either at head or foot; considering that they are left to justify themselves by the exactness which they have from the Letter-Founder; and which soon shews itself where Figures are confined between brass rules, which yield neither to the protruding nor receding Figures, but cause the first to rise, and the other to sink, or to drop out.

To be provided with neat Figures, for Arithmetical and Mathematical Work, is as interesting as being furnished with other good Printing materials. But the goodness of Figures does not consist in their having soft and fine strokes, but rather in such circles

and lines as are much of the same strength with the mean Face. Thus we see in some Figures the ascending turn of 6, and the rounding off in 9 too fine and too tender to withstand accidents equally with other Figures: neither do they shew themselves plain and ready to the eye, especially upon brown and stubborn paper that has not been well prepared for the Press. The like debility may be observed in the Figure of 7, whose oblique line is sometimes so fine and soft as scarce to sustain the least pressure.

Sometimes, in case of necessity, the Figure of 1 is substituted by Small-capital 1's, which often proves the intire loss of the latter, in that they are not returned to their fellow sorts again; in which case the want of Small Capital 1's is supplied by Figures of 1: which may easily be discovered, by taking notice, that the Figure of 1 is n-thick, and bears off too much among Small Capitals; whereas the Small Capital 1 may be distinguished from a Figure of 1, by its top and foot line, and by not bearing off enough betwixt Figure and Figure, unless the 1 is cast out of proportion.

The like caution may be given, to distinguish Nullo's or Noughts from Small Capital and from Lower-case o's; in taking notice, that the Cypher is of a round make, and lean-faced; whereas the Small Capital as well as the lower-case o's are known by being of an oval shape, and their semi-circular sides spreading, or (as Founders call it) fat.

The Figure 5, when put inverted, under a Capital C, serves for a very good tail to the *C à la queue*, especially if the Capital is a two-line letter, which has no Beard; or is otherwise contrived to admit of a Brevier or smaller Figure of 5 under the C, without a seeming separation.

The Figure of 6 may be readily changed into a 9, by inverting the former: which the Figure of 9 also submits to, to supply the want of 6's, when the Figure of 6 is used inverted, for that purpose. But this transforming of Figures ought to be rectified as soon as it can be, to avoid bad consequences; considering that an error in Figures is more pernicious than a literal fault, tho' both ought to be equally avoided.

The lower half of the Figure of 8 being cut away, the upper part serves for a superior o; but if it is used with Letter of the same Body, will needs shew itself too bold for its function; and therefore the charges for casting a proportionable Superior, at once, would not be ill bestowed, as it will save the expence of having otherwise Figures of 8 cast.

One time Printers thought it a great impropriety, to use erect Figures in Italic matter, because they judged, that the sloping of that character would be intercepted by them; and therefore had Figures cast of the same inclination with Italic: but this peculiarity is here intirely laid aside, tho' it still prevails in foreign parts, with Printers who suffer themselves to be incumbered with needless sorts, because Founders do not chuse to destroy their antique and obsolete Matrices,

trices, but will make use of them to the last, tho' they should prove of no interest or advantage to themselves, as may be demonstrated by Italic Figures, which are cast very thin; whereas strait Figures are cast n-thick, and require scarce half that number which Italic ones do, to make a pound weight. Strait Figures, therefore, that are cast exactly to the thickness of an n-quadrat, are proper to be used as well with Roman as Italic Letter; but more particularly in Arithmetical works, on account of their ranging under each other; whereby the casting up of different sums is rendered more easy and sure. But the beauty which Figures shew in ranging exactly, is greatly interrupted by cutting off by a Comma, the Figures which express Millions, besides such as contain Tens of thousands: which, however, is no law with most Accomptants, who judge it needless in Schemes that are printed, by reason that the number of Figures in a sum is instantly known by means of their perpendicular order; and therefore may be expressed, without any stops between them; which make the composing of Table-work only more troublesome, and lessen sometimes the credit of a good workman, if the beholder is not acquainted with the true reason for the awkward look which Figures make that do not range.

III. *Of Scratched Figures.*

THOUGH Scratched Figures are at present not used with us; yet, as they still are met with in several Printing-houses, it might be construed an omission

in us, were we not to take notice of them; and therefore mention, that they were used in that Species of Arithmetic which is called *Division*; and that they are not yet abolished in Germany, and other foreign parts, where they still are thought necessary in the practice of the said Species, by scratching the dividing and divided, Figures, as soon as they have been adjusted by Subtraction and Multiplication.

And now we have made our observations upon the Numeral Letters of the Romans, as well as upon Modern or Arithmetical Figures, we think it not impertinent to this Section, to shew the manner of counting by Greek and Hebrew characters; in which we hope to oblige the Curious, and serve those who shall have occasion to acquaint themselves therewith.

IV. *Of Greek Numerals.*

INSTEAD of seven letters which the Romans appropriated to numerate by, the Greeks employed their whole alphabet, and more than their alphabet, in that service: for, besides *that*, they contrived three symbols more, and made their Numerals to consist of 27 Sorts, which they divided into three classes; the first of them to contain Units—the second, Tens; and—the third, Hundreds. Accordingly the first class consists of the nine following Numerals, viz.

α	β	γ	δ	ϵ	ζ	η	θ
1	2	3	4	5	6	7	8

In this class, it may be observed, the Greek β or *Stigma*, is made an auxiliar Numeral letter, to stand for 6, and is called ἐπίσημον.

The second class includes the nine Numerals which express Tens, viz,

ι	κ	λ	μ	ν	ξ	ο	π	ζ
10	20	30	40	50	60	70	80	90

In this second class, a particular symbol, resembling much an inverted Hebrew *Lamech*, serves to express 90; tho' others use an γ in the room of it; to which, as well as to the former, they give the name of *Κόππα*.

The third class contains the Numerals which carry Hundreds with them; and are, viz.

ρ	σ	τ	υ	φ	χ	ψ	ω	πς
100	200	300	400	500	600	700	800	900

In this class the additional symbol which stands for 900, is a Compound of a *Pi* and a *Sigma*; for which reason it is called *Sanpi*; tho' others represent it by a mark like this, viz. Ϡ

To raise Numbers to Thousands, nothing else is required than to begin the alphabet again, and to mark each letter with a dot, or an acute under it, in the following manner, viz.

1000	2000	3000	6000	10000	100000
α _.	β _.	γ _.	δ _.	ε _.	ς _.

Still higher Numbers are noted with double Acutes under them; thus,

1000000

1000000 2000000 3000000, &c.

 α
" β
" γ
"

The manner how to join these Numerals, may be learned from the example underneath, viz.

11	23	104	1005	1754
$\alpha\alpha$	$\kappa\gamma$	$\rho\delta$	$\alpha\varepsilon$	$\alpha\psi\nu\delta$

Besides the recited way of counting by Lower-Case letters, the Greeks made choice of six Capitals, to express sums by, viz.

I	II	Δ	H	X	M
1	5	10	100	1000	10000

Among these Numeral letters the *Pi* is peculiar, for admitting the *Delta*, *Eta*, *Chi*, and *Mu* into its ventre, and for giving such an incorporated letter five times the value which it has of itself; as,

$\overline{\Delta}$	5 times 10 is 50.
\overline{H}	5 times 100 is 500.
\overline{X}	5 times 1000 is 5000.
\overline{M}	5 times 10000 is 50000.

To these inclosed Numerals, any part or quantity may be added, according to the value which is contained in each of the six Numeral letters exhibited in the preceding page.

Lastly; notice ought to be taken, that when a Numeral letter is marked at the top, it shews it to be a fraction; as,

One fourth.
ד'

One fifth.
ה'

Five eighths.
ה'ה'

V. *Of Hebrew Numerals.*

THE manner of counting by letters, 'tis out of dispute, is derived from the Hebrews, who for that purpose made use of the letters of their alphabet, without the assistance of other symbols. Accordingly, the letters which express Units, are,

ט	ח	ז	ו	ה	ד	ג	ב	א
9	8	7	6	5	4	3	2	1

The following contain Tens; viz.

צ	פ	ע	ס	נ	מ	ל	כ	י
90	80	70	60	50	40	30	20	10

And these underneath, Hundreds. viz.

ץ	ף	ן	ם	ך	ת	ש	ד	ק
900	800	700	600	500	400	300	200	100

In joining Hebrew letters for numbers, it is a rule, to put the letter of a greater signification before a character of a less valuation; as,

יב	לא	צנ	קה	רסו
12	31	93	105	266

The numeral signification of the five final letters is sometimes expressed by compounds; as

ך by הק	ם by תר	ן by תש	ף by תת	ץ by תתק
500	600	700	800	900

שׁ with an Acute over it, stands for a 1000: but where the contents of a sum amount to above 1000 the letter to the right hand shews the order of Thousands, and the שׁ is doubly accented; thus,

בֹּשׁ	גֹּשׁ	הֹשׁ
2000	3000	8000

And if Hundreds are added to them, the double-accented שׁ is omitted, and only a common letter put at the beginning, to intimate the order of Thousands; thus,

בַּק	דַּשׁ	וַת	זַתַּשׁ	חַרְגַּ
2100	4300	6400	7700	8203

In printed Books, and Letters, the Jews date their years [after the Creation of the World] without putting an ה at the beginning, to imply 5000, and only set down the Hundreds, and Parts, of which their years consist above the Thousands. But in this case they seldom forget to put the letters לַבַּק after the date; which is to inform the reader, that the date thus abridged, is according to the minor supputation.

In writing 15, the Jews chuse to do it by טו, instead of יט, because these last letters are used in *Jehovah*; and therefore think it a prophanation of the Lord's name, if the said letters should be used for Numerals. Neither do they express 16 by יז, but make use of טז, because the two letters, viz. Jod and Vau, are likewise comprehended in the word *Jehovah*.

S E C T. V.

Of Referenees.

REFERENCES are called, all such Marks and signs as are used in matter which has either side or bottom Notes; and as serve to direct the Reader to the observations which are made upon such passages of the Text as are distinguished by them, and demand a Reference of the same likeness to be put to the Notes by which the Matter is illustrated, or otherwise taken notice of.

Referenees which are used in Works with Notes to them, are variously represented, tho' oftener by Letters, than other Characters. Accordingly, some put common letters between Parentheses; thus. (*a*) (*b*) (*c*), &c. Others, again, chuse to see them betwixt Crotchets, as [*a*] [*b*] [*c*], and so on to the end of the alphabet; instead that others begin the Notes of every page with (*a*), in which they are as right as the former; and have this advantage besides, that the order of References is not so liable to be interrupted as by going through a whole alphabet. Were we authorized to vary from the customary way of practice, we should recommend literal Referenees to begin with every *even* page, if it has Notes; and to carry them no further than to the last Note in the opposite *uneven* page; by which means the order of the Referenees would appear at one view, and an irregularity in them rectified without much trouble.

Instead

Instead of Letters, whether Capital or Lower Case, Figures are used in the same manner, and with the same propriety; for the one as well as the other are of equal signification, when used for the same purpose:—But the References which look the neatest, besides being the most proper, are *Superior* Letters, or else *Superior* Figures; for both were originally contrived and intended to be employed in Matter that is explained by Notes, whether by way of Annotations, Quotations, Citations, or otherwise. Nevertheless we observe, that Superior letters are not used upon every occasion, but chiefly in large and lasting works which have sometimes more than one sort of Notes, and therefore require different References; in which case not only superior letters, but also such Marks are used as never were designed to serve for References. Another reason why Superior letters are not used upon all occasions, is, that they are often objected against by Gentlemen who chose to read copious Notes first, and then refer to the Text, where they fancy Superior letters not conspicuous enough to be readily discovered. And indeed, Superiors of the smallest size are not only inconvenient to the Reader, but also troublesome to the Press-man who is ambitious to make them come off clear, notwithstanding their disadvantageous situation. But, to abide by the title of this Section, What are called References by Printers, are these, viz.

1. The Paragraph	¶
2. The Section	§
3. The Obelisk	†
4. The double Dagger	‡
5. The Parallel	
6. The Asterism	*

These are the Names and Figures of what Founders reckon among Points, and Printers call References; but which were designed to serve for other purposes than they have done of late; as will appear from their respective functions.

1. The *Paragraph* is a Mark which formerly was prefixed to such matter as Authors designed to distinguish from the mean contents of their works; and which was to give the Reader an item of some particular subject. At present Paragraphs are seen only in Bibles, where they shew the parts into which a Chapter is divided, and where its Contents change. In common Prayer books Paragraphs are put before the matter that directs the order of the Service, and which is called *The Rubric*, because those lines were formerly printed in Red. Otherwise it is a useless Sort, and unfit to serve for a Reference, as long as there are others which have not that antique look.

2. The Sign which implies the word *Section*, is a Sort, likewise seldom employed, because in Work which is divided into Chapters, Articles, Paragraphs, Sections, or any other Parts, they are commonly put in
lines

lines by themselves, either in Capitals, Small Capitals, or Italic, according to the size of the Work. But the Sign of Section is sometimes used in [Latin] Notes, and particularly such as are collected from foreign books, which generally abound with Citations, because they help to make the Author to be counted *very* learned.

The Sections which are open-bellied, and which take up the whole depth of their Body, make no bad figure when they are put the flat way, and used instead of a line of small Flowers.

3. The *Obelisk*, or *long Cross*, erroneously called the *single Dagger*, is frequently used in Roman-Catholic Church-books in prayers of Exorcism, at the Benediction of Bread, Water, Fruit, and upon other occasions, where the Priest is to make the sign of the Cross: but it must be observed, that the long Cross is not used in books of the said kind, unless for want of square Crosses, (✚) which are the proper symbols for the before-mentioned purposes; and are used besides in the Pope's Briefs, and in Ordinances and Mandates of Archbishops and Bishops, who put it immediately before the signature of their names. But the square Cross is not reckoned among References of which we were speaking; whereas the long Cross answers several purposes; for besides serving instead of a square cross, 'tis used in Genealogical Tables and such like Work, where it denotes the death of a person, or the extinction of a family. Sometimes it serves for a Signature to matter that has been either omitted, or
else

else added ; and which is intercalated after the Work is gone beyond the proper place for it. But the chief use which is made of the Obelisk, is by way of Reference, where it serves in a double capacity, viz. the right way ; and inverted.

4. The *Double Dagger* is a Mark crouded in to make one of the improper References.

5. The *Parallel* is another Sign which serves for a Reference, and is fit to be used either as side or bottom Notes.

6. The *Asterism* is the chief of the References, which presents itself most readily to the eye, on account of having its figure a-top, and leaving a blank below ; which makes it a Superior.

In Roman Church-books the Asterism divides each verse of a Psalm into two parts ; and shews where the Responses begin : which in our Common Prayer-books is done by putting a Colon between the two parts of each verse.

The Asterism is sometimes used to supply a name of a person that chuses to pass anonymous. Asterisms, again, denote an omission, or an hiatus, by loss of original Copy ; in which case the number of Asterisms is multiplied according to the largeness of the chasm ; and not only whole lines, but sometimes whole pages are left blank, and marked with some lines of Stars.

In satyriizing persons in Pamphlets and Public papers, the Asterism is of great service ; for it is but putting

ting the first letter of a person's name, with some Asterisms after it, and ill-natured people think they may characterize, and even libel, their betters without restriction.

Asterisms may serve instead of a line of Small Flowers, if they are set to stand progressively; and they perform the same service when they are put alternately, one set the right way, the next inverted.

The Asterism, used as a Reference, has a proper position for its figure; but for all other purposes it would be better to be in the middle of its flank; which would save the trouble of justifying it, when used the flat way, and prevent the looks of bad spacing, which the blank part of it must needs occasion in close lines.

Thus have we shewn, that the symbols which are used as References, were designed for quite different purposes. We are therefore of opinion, that it would not have been one of the least improvements, had some other Marks been devised, which should have appeared in a more becoming shape than the above References; and more perspicuous than Superiors of the least size.

II. *Of Lower-Case Sorts.*

THOUGH we have been speaking of Lower-Case Sorts before; yet as they were then considered as they are with Founders, we cannot well mention them here, without presenting them in that order in which

N

they

they stand with Printers: accordingly, Lower-Case Sorts consist of

Small Letters of the Alphabet, both Single and Compound—Points—Quadrats—and Spaces.

S E C T. I.

Of Small Letters, Single, and Compound.

THE order of the Small Letters, and their Compounds are, viz.

a æ b c ç è é & f ff fi fl ffi ffl g h i j k l m n
o œ p q r s ff si fl ffi lb lh lk lt t u v w x y z.

Of these Small-Letter Sorts, some are lodged in the Upper-Case, in most Printing-houses; but are not reckoned, properly, among *Upper-Case Sorts*: the k, therefore, because it lies in the Upper-Case, is distinguished by the name of *little k*; and the rest, viz. ffi ffl lb lk lt, being compounds, are called by their respective contents, without styling them either Upper or Lower-Case.

Though exhibiting the above Sorts will be thought immaterial by such as are perfect in the Art, it may nevertheless be of service to those who initiate themselves; as it will inform them, that the *Printer's Alphabet* consists of more than Four-and-twenty Letters; and shew them what Letters are cast in a piece, and which must not be set separately, unless they are divided at the end of lines; as, ffi, in *suf-ficient*—ffi, in *as-sistance*—lb, in *hus-band*, &c. Neither can it be
of

of disservice to Authors who correct their own works, and who ought to be acquainted with Ligatures, and compound Sorts, to mark them according to their contents: for it has been observed, that even *young* Correctors have marked only one part of a Ligature; as, the *f* of *fi*, to be altered into an *f*; the *k* of *sk*, to be turned into *x b*; and so in other cases, similar to these; whereas they would have marked the whole Ligature *fi*, *sk*, &c. had they taken notice, that these and several other Sorts are cast in a piece, for the reasons which have been given before.

Of the Lower-Case Sorts, *i v x l c*, are Numeral letters, chiefly used in Notes to Holy Scriptures, to shew the number of the Chapters cited; which, in the Bible, is expressed by Numerals in Capitals; and of which *CL*, or 150. is the highest number to which the Book of Psalms amounts; for which reason neither the *d* nor *m* have opportunity to shew their valuation; else, the signification of the five Lower-Case Numerals is of the same power with Capitals, and are governed by the same rules with them.

S E C T. II.

Of Points.

THE Order in which Points stand with Printers is, properly, the following; viz. The Comma—Semicolon—Colon—Full-point—Sign of Interrogation—Sign of exclamation—and Division.

To these we venture to add, the Parenthesis, and Crotchet, under the names or *Signs of Intercalation*; and the Apostrophus, by the name or *Sign of Abbreviation*.

Points, or Stops, were invented to divide a Sentence into Rests and pauses, according to the quantity which is intimated by their figures.

Points are not of the same antiquity with Printing; for the inventors of the Art were not the Authors of them; though it was not long after that the Colon, and the Full-point, were contrived; the first to shew the first part of a Period; and the Full-point, to close the other division thereof. In process of time, a Comma was added to the infant Punctuation; which new Stop had no other figure than that of a perpendicular line, proportionable to the Body of the Letter. Thus they contented themselves above fifty years with these three Points, which they thought sufficient to shew where a pause was required in reading; till towards the close of the fifteenth Century, Aldus Manutius, a Man eminent for the restoration of learning, among other improvements in the Art of Printing, corrected and enlarged the Punctuation of those times also: for he assigned the former Points their proper places—gave a better shape to the Comma, and—added the Semicolon; a Point to come in between the Comma and Colon.

The moderate and regular use of Points, it must be confessed, is of singular service to make Matter more easy for reading, and more ready for apprehension: whence it may be guessed, what attention formerly was required

required, to read without Points, besides the difficulty of distinguishing word from word, and understanding the various Abbreviations which writers used to make from their own fancy.

Since, therefore, we have a sufficiency of Points whereby to express the construction of a subject, *Pointing* ought to be considered as a very material article with Authors, whose business it is to give in their Copy for the Press, not only clear and legible, but also pointed to their own liking: for since Pointing is become a mere humour, which is sometimes deaf to rule and reason, it is impossible for a Compositor to guess at an Author's manner of expressing himself, unless he shews it in pointing his Copy: and if he would have the Reader imitate him in his emphatical delivery, how can a Writer intimate it better than by pointing his Copy himself?

But notwithstanding this essential duty, incumbent upon Authors, not all have regard to it, but point their Matter either very loosely, or not at all: of which two evils, however, the last is the least; for in that case a Compositor has room left to point the Copy his own way; which, though it cannot be done without loss to him, yet it is not altogether of so much hinderance as being troubled with Copy which is pointed at random, and which stops the Compositor in the career of his business more than if not pointed at all.

It is true, that the expectation of a settled Punctuation is in vain, since no rules of prevailing authority have been yet established for that purpose; which is the reason that so many take the liberty of criticizing upon

upon that head; yet when we compare the rules which very able Grammarians have laid down about pointing, the difference is not very material; and it appears, that it is only a maxim with humourous pedants, to make a clamour about the quality of a Point, who would even make an erratum of a Comma which they fancy to bear the pause of a Semicolon, were the Printer to give way to such pretended accuracies.

It must be allowed, that all Matter is not pointed alike; for some requires more stops than other. Thus, familiar discourses, or historical and narrative subjects, do not take up so many Points as explanatory Matter; and that, again, not so many as English Statute Law.

It must likewise be owned, that every Compositor is not alike versed in Pointing; and therefore such as are dubious whether they can maintain their notion of Pointing, ought to submit to the method, or even humour of Authors, and authorized correctors, rather than give them room to exclaim about spoiling the sense of the subject, because the Points are not put *Their* right way: neither is it difficult to fall in with correctors who use themselves to a set method of spelling and Pointing, as well as minding real Faults; but these requisites seldom meet together in correctors, because some neglect the most essential part of their duty, and think to shew a consummate attention when they can espy a word that is ambiguous, as to spelling; or find room to put either a Point in, or to take one out. But as we do not propose to make *this* the place for our observations upon correcting, we will abide
by

by the title of this Section, and touch upon the Use of Points, which have been long since introduced, and which have been found sufficient to give a harmonious sound to reading.

1. The *Comma*, then, is the first of Points, or Stops; and requires the shortest pause, though that is often lengthened beyond it's measure, by being too repeatedly used in a period of no great compass. But as Pointing is regulated by the free, or by the stiff way of writing, to which Authors have accustomed themselves; it will not be labour in vain for a Compositor, to examine his Copy, and to observe in what manner it is pointed, whether properly, or at random: for some Gentlemen who have regard to make the reading of their Works consonant with their own delivery, point their Copy accordingly, and abide thereby, with strictness, which, were it done by every Writer, Compositors would sing, *Jubilee!*

Commas are used to distinguish quoted Matter from the mean Text: for which purpose two inverted Commas are put at the beginning of such Matter, and continued before each line of the quotation, till the close thereof is signified by two Apostrophus'; which by some is called, the *Mark for Silence*; intimating thereby, that the borrowed or quoted passage from another Author ceases with that mark. But the rule for double-commas is sometimes confounded, when they are put before matter which is only an extract, or the substance of a passage drawn out to corroborate an Author's Argument: in which case such extracted matter would be best known by having single inverted Commas

Commas before it as a verbal Quotation is distinguished by double ones. Besides this proper use of inverted double and single Commas, some Authors use the former sometimes before such of their own Discourses as they would have particular notice taken of, though they might succeed in their aim, without using double Commas: and as neither double or single inverted Commas are proper to distinguish an Author's own matter from that before described, we are of opinion, that some other mark might be devised to distinguish an Author's select and enforcing matter from the mean Text: and therefore propose to substitute the inverted Comma or Commas by an inverted Full-point, or Colon, or a Comma standing in its proper position. Thus by turning one of these Points into a mark, it would instantly tell the Reader, which is a verbal Quotation, by being double-comma'd; which a collected, or extracted one, by being single-comma'd; and which, again, an Author's own Select matter, by having one of the proposed Points along the side of it.

The common Space which is put between inverted Commas and the Matter, is an n-quadrat, though a thick Space is sufficient, especially in Letter of a larger size than Long Primer: but in this a Compositor chuses which of the two he observes to be most plenty.

Besides the before-recited use of a Comma, it serves instead of a superior c, in the nominal appellation *Mac*, or *M^c*; where an inverted Comma after a Roman M will stand better than with an Italic one, which is kerned,

The use of inverted Commas is derived from France, where one *Guillemet* was the Author of them; who, we may judge, was no great friend to Italic Letter, and therefore attempted the fall of it, by excluding it from serving for Quotations: which he distinguished from the matter of the Text, by two inverted Commas.

Though the Comma is one of the junior Points, it has nevertheless the first place in every period, and governs the order of the intermediate ones, viz. Semicolon and Colon. To perfect ourselves, therefore, in placing Commas right, is the ready way to *fair* Pointing, but to set down rules for arriving to it would be endeavouring in vain; since practice is the surest guide. Neither is it supposed, that those who initiate themselves for the Art, should be so destitute as not to understand Pointing, even according to the rules of Spelling-books.

2. The *Semicolon* is a Point which is composed of a Comma, and an inverted Full-point; to shew the quantity of the pause or rest which it requires.

The Semicolon is of great use to enforce and illustrate what has been advanced, and digested by the Comma. It serves likewise to concatenate such parts of a period as are to be supported by a Point of more elevation than a Comma, which helps to relate the matter more distinctly; whereas the Semicolon keeps the parts of an argument together.

3. The *Colon* is a Point, prior both to Comma and Semicolon. It shews where the first part of a paragraph

has been digested by Commas and Semicolons, for making observations, objections, or enlargements upon it, before the Full-point puts a stop to it.

The Colon serves to distinguish Columns from Columns in Figure-work that consists of different small accounts; and where a rule would make but a very short shew: in which case some chuse to use a Colon; thus.

3456 : 782 : 235 : 59

1000 : 40 : 3 : 134

25 : 100 : 334 : 412

4. The *Full-point* makes a stop, and entirely closes the contents and substance of a Period, or Paragraph.

Full-points were formerly used in work of Accounts, to lead and to connect the posted Article with its contingent valuation.

Instead of which, it has been some time the Custom in the Foundrys of Messrs. *Fry and Sons*, in London, to cast dotted Rules from one to four m's of of most the different sizes of Types, a specimen of which may seen as under,

A	3456
B	25
C	2345

Full-points serve also to shorten, or to abridge words, particularly Latin ones; which language not only best admits of Abbreviations, but even requires them to be used upon several occasions, to perpetuate the

the custom of writing Latin as the former Romans did. For this reason Latin Inscriptions on Coins, Tombs, &c. are generally composed of words which admit of being abbreviated, and are considered as adding to the grandeur of the Epitaph. But the Abbreviations that are of most use for a Printer to know, are those which may be made in Catalogues of Latin Books; where not only most names of Persons and Places; but also of all other words, are abridged, which readily yield to it by their terminations; of which, and the Proper names, we shall give a Specimen under the Head of Abbreviations.

After &c. and after Figures, the Full-point is no Stop, unless it is at a Period; and therefore the Point which is required either after the Abbreviation, or Figures, is put after the Full-point; with a thin Space before it. But this is not a rule with such who hate to be counted stiff in Pointing.

5. The Sign of *Interrogation* needs not to be explained; for the very appellation tells us, that it is a mark of which is used to shew where the Question is proposed, that gives room for, or demands, an Answer.

6. The Sign of *Admiration*, or *Exclamation*, likewise explains itself by its name, and claims a place where Surprise, Astonishment, Rapture, and the like sudden emotions of the mind are expressed, whether upon lamenting, or rejoicing occasions.

The Admirative part of a Paragraph, as well as of the Interrogatory, is always to begin with a Capital letter.

Exclamations are sometimes mistaken for interrogations, as well as these are for Exclamations; and therefore care should be taken in examining to which of these two variations the one or the other inclines.

7. The *Division*, or *Hyphen*, is a Mark of the utmost authority, considering that it has given employment not only to a number of Spelling-Book-Authors, but also others of higher degree, who have engaged in the controversy of Spelling.

In dividing words, very few Printers suffer a syllable of a single letter to be put at the end of a line; as, *a-bide*, *e-normous*, *o-bedient*, &c. But it is allowed in Marginal Notes, and in other narrow measures, where sometimes the getting in of *one* letter will save the trouble of over-running several lines; it is also allowed by such as prefer Matter spaced close, and even.

It is proper, if possible, to keep the derivative, or radical word, intire and undivided; as, *Occur-rences* *Gentle-man*, *respect-ful*, *remiss-ness*, &c. By the same rule, all the Participles whose Verbs terminate in an *e* feminine, retain it at the end of lines, when they are divided: Thus the Verbs *abide*, *ascribe*, *aspire*, *bite*, *bore*, *dictate*, *ease*, &c. as also the Verbs which terminate in *ke*, as *brake*, *make*, *take*, &c. retain their *e* feminine at the end of a line; and the syllable *ing*, which makes the Participle of the Verb, begins the next line.

The Hyphen, or Division, is used not only to connect the members or syllables of words that are divided at the end of lines; but also to join two or three words together;

together; which then come under the appellation of *Compounds*; and consist frequently of two Substantives, whereof the last is generally put with a Lower-case letter; as, *Bird's-nest*, *Love-letter*, *Pin-cushion*, &c.

To acquire a competent knowledge of *Compounds*, does not depend upon mere fancy, but requires the assistance of reason, to judge by the rise and fall of the tone, which is an Adjunct; and whether *that* and the preceding Appellative may not be joined into one word rather than make a Compound of it, in connecting both by a sign which is intended for a proper symbol of dividing words into syllables.

The Particles *after*, *before*, *over*, *under*, &c. are often connected to other words, but not always a proper Compound: Thus, *Under-age* admits sometimes of an Hyphen; but at other times makes two distinct words: *before-mentioned*, is likewise a Compound when it stands before a Substantive; as, in the *before-mentioned* place; whereas it requires to be separated, when it comes after a Noun; as, in the Chapter *before* mentioned.

Divisions are used instead of rules, in Table-work of narrow Columns: and though they are employed in wide measure also, 'tis not always that they come off clear; but beard, and cut the paper, unless proper care be taken in wetting it accordingly.

It shews a good judgment in a Compositor, to prevent Divisions, or any other Point, to fall too repeatedly upon one another, at the end of lines, especially where a syllable may be got in, or drove out, without much difficulty.

Of the two Signs of Intercalation ; viz. The Parenthesis, and Crotchet.

THE *Parenthesis* serves to inclose such parts of a Period as make no part of the subject, yet at the same time strengthen and raise the argument, which, however, would lose nothing of the sense or substance, were the (in the *Parentheses*) inclosed matter taken away.

Gentlemen who know how to write without confining their language to *Parentheses*, now make no use of them, but put their intercalations between two Commas, which makes them as intelligible as though they were wedged in between *Parentheses*. Nevertheless, where Authors think otherwise, they ought not to be opposed in their judgment, especially if they express it in their copy.

Parentheses are cast to stand according to the position of Letter ; and therefore *Italic* ones ought not to serve with Roman, nor these with *Italic* matter of intercalation.

Parentheses serve likewise to inclose letters, or figures, for References.

The *Crotchet* has relation to the Grammatical Figure, called *Ellipsis* ; which admits of omitting some words in a sentence, that are nevertheless understood. Thus we say, *I was at St. Paul's* ; understanding, *Church—I am going to the Opera* ; meaning, *House*. Such *Ellipses* are frequently seen in school-books for Latin, where the words to be omitted are put between *Crotchets*, that scholars may have the full scope of the sentence ;

sentence; and at the same time accustom themselves to elegant Latin. But instead of using Crotchets upon the like occasion, some distinguish Ellipses by Italic, provided nothing else is varied in the Text; as it is in English Bibles, where such words as are elegant omissions in the Hebrew, are filled up by words of Italic Letter. Crotchets are also used,

1. In Work of Receipts and Prescriptions, that make but short paragraphs, and are generally ranged alphabetically. In such work, what would else serve for Heads by themselves, is put in Italic at the beginning of each Article.

2. In forms of particular Prayers; and Notations.

3. To put the Folios of Pages between, that have no Running Titles.

4. To inclose Letters, or Figures, for References.

5. In Poetry, with Reglets between that answer to some Body of Letter, which generally is Long Primer. In this case such word or syllable as will not come into the measure, is put under, and sometimes over the line to which it pertains; thus.

[rise;

Honour and shame from no condition
 Act well your part, there all the honour

[lies.

Of the Apostrophe.

WE call the Apostrophe a Sign of Abbreviation, because it denotes the ejection of some letter, or letters, that suffer themselves to be cut off by it.

To

To this the Vowel *e* yields oftener than any other letter, not only in poetical Works, but also in prose Writings; for the *e* may be cut off by an Apostrophe, in all such Verbs whose Preterimperfect, or other Tenses, end in *ed*, be the Consonant what it will that precedes the Vowel, except the *d*, which does not allow of having the *e* superseded by such an abbreviation: neither is it elegant to put that Accent after *c* and *g*, because omitting the *e* gives the syllable a rough and harsh sound; though that is not regarded in Poetry, where it contracts two syllables into one, to give a Verse its proper measure. But in the above cases, the Compositor uses the Apostrophe after his own discretion, and according as he finds what way the syllable *ed* runs the smoothest.

The Apostrophe, sometimes, cuts off a Vowel at the beginning of words, as *'bate*, *'scape*, *'Squire*: sometimes an entire syllable; as at *'prentice*, *'fore*, *'change*. But these and many other Abbreviations of this kind are not used in ordinary Matter, but chiefly in Poetry, Plays, and Epistolary and Humorous Writings; and are under the arbitration of an Author, who best knows where such Contractions serve his purpose.

The Genitive case of the Singular number is generally known by having *'s* for its termination; which [*s*] when it stands with a Proper name, is varied from the Letter of that name.

Several Italic letters being kernered, the Apostrophe does not join to *d'* *f'* *j'* *l'*, but require a Hair-space before them.

S E C T. III.

Of Quadrats.

THE different measures to which Quadrats have of late been cast, answer either to Four, Three, Two, One m and n-Quadrats of their respective Bodies.

Not only m and n-quadrats for Figure-work, but also the larger sorts, require a Founder's utmost care in dressing them; for if they differ ever so little in the depth of their Body, the fault will be discovered sooner than in Letter, especially in poetical matter. And here it will be found, how inconvenient, and even prejudicial it is, to have Founts of the same Body cast to different Sizes; because every Quadrat is hereby confined to its own Fount, and cannot serve in any other, unless by accident, and upon unavoidable occasions.

Large Quadrats, cast exactly to m's, are very convenient Sorts in Table-work; but as vexatious, if they prove too tight; and therefore, if they *cannot* be cast to that exactness which they require, the least of the two faults would be, to see them rather too slack than too hard for the Composing-stick; for a line of Quadrats, if justified to the measure, will be found too tight, in comparing it with a line of matter, which, as it were, is perforated, and will shrink at the force of a Mallet; whereas Quadrats, being of a solid body, maintain their extension.

Reglets have been much spoken of as more proper for Whites than Quadrats, to prevent the crookedness

of matter; but their being often wetted, renders them in time unfit for that use, by their having an unequal swell; to obviate which, we cannot but recommend the Space Leads which are a Specimen of the ingenuity of Messrs. *Frys*; and being cast of any body, or length, from four to twenty m's Pica, of the greatest hardness, and equality of size, are found to answer better than any thing heretofore used for that purpose, and for open matter far cheaper than milled Lead,

S E C T. IV.

Of Spaces,

THE use of Spaces is to separate one word from another, thereby to render reading easy and distinct; whereas in the infancy of the Art, Matter was printed so very close, that it was difficult to distinguish word from word.

If we reckon the n-quadrat among the Spaces, as it really ought (when used in Matter) we may count four sorts of Spaces for composing, viz.

Two to an m, or two n-quadrats.

Three to an m, or three thick Spaces.

Four to an m, or four middling Spaces.

Five to an m, or five thin Spaces;

besides Spaces for justifying, called *Hair Spaces*; of which some are cast so very thin that they deserve to be admired.

Of Spacing.

SPACING consists in putting a proper distance between words, either by Spaces, or m and n-quadrats.

Matter is spaced either Wide or Close. Thus, lines in Capitals and Small Capitals require an n-quadrat between each word; whereas in Lower-case matter a middling Space makes a sufficient separation.

Capitals being generally set with Spaces between each letter, regard should be had to those letters that bear off each other, and therefore admit of a thinner, and sometimes of no Space at all, between them, as VA AW FA AT.

In common Roman Matter, a moderate equal distance between words is counted true Spacing, and recommends a Compositor greatly for a good workman—which epithet, at least, He deserves, who perseveres in performing, for neatness sake, what is prejudicial to his present interest, and meets with very few judges besides.

In spacing close lines with Capitals in them, we lessen the Spaces before large letters, to gain the more room between common words.

It is an old rule, to put an n-quadrat after an f, but this is not always regarded, unless the arch of that letter is so very projecting, that no less than such a Space will separate it well from the next word.

It is also a rule, to put an n-quadrat after a Comma, Semicolon, &c, but it is no law neither; though (were it of any signification) it might be made one, in matter that makes no full lines.

Another rule that is inculcated into beginners, is, to use an m-quadrat after a Full-point: but at the same time they should be informed, not to do it, where an Author is too sententious, and makes several short periods in one Paragraph. In such case the many Blanks of m-quadrats will be contemptuously called *Pigeon-holes*; which, and other such trifles, often betray a Compositor's judgment, who may be a good workman else.

The j requires a strong space before it, especially after a word that ends with g. The same is to be observed between words whereof the one ends, and the other begins, with ascending letters, whose perpendicular sides face each other; as, d b, d h, d k, d l, l b, l h, l k, l l.

To use Spaces where n-quadrats will serve, is making the former scarce; which is often done by those who think n-quadrats betwixt words too much; and at the same time do not consider that two thick Spaces extend themselves further. And again, to use n-quadrats where-ever there is room for them, would too soon lessen them. Both therefore ought to be used discretionally, according to the plenty of one and the other. And though there may be no want of n-quadrats for ordinary matter; yet as Figure-work requires a large quantity of them, they should be saved out of common matter, to serve upon the like occasions.

Spacing

Spacing being an Article of moment to a Compositor, it is a duty in one who has the care of instructing a beginner, to acquaint him with every thing that can forward him in well-spacing; that so he may accustom himself to a method which shall seem best to him; though most Compositors chuse to put a thick Space, called *The Composing Space*, after a word. But this (in our opinion) is not the most ready way; because if the spelling part at the end of a line does not admit of them, the trouble of changing them is considerable; and therefore those who put Spaces as they come up, have a better chance to justify the contents of their lines to equal distances. Add to this, that putting nothing at all after a Comma, Semicolon, or even after a Full-point in composing, shews more readily [towards the close of a line] how much more or less may be taken in; and what Space may be allowed after a Point or Points in a line.

To space open and wide, is no advantage to a Compositor, and wastes Spaces; for want of which sometimes Letter lies useles in Cases. What farther attends setting wide, is, that it discovers where an Out has happened, by the closeness of the matter where the same has been got in: And as to Doubles, they shew themselves too conspicuously by the Pigeon-holes, which are made to drive out what was doubled; either of which accidents may be remedied much sooner in matter that is spaced between both.

Were it possible to keep each sort of Spaces separate, the thickest, then, would best suit Italic, because

cause that Letter requires to be spaced more open than Roman, on account of its kerned and projecting letters. Thus the *f g j p s y* require a stronger Space *before* them, than words that begin with any other letters; and *d f l* demand one of the same force *after* them, when they are the last letters of a word. But to separate Italic Capitals properly and equidistant, is what tries a Compositor's judgment which he has of Spacing: for the various approaches which they make to each other, on account of their obliquity, and being kerned besides, makes it difficult to bring them to an harmony; and would make them more so, were it not for Hair-spaces, which in that case are of singular service; and which ought not to be used profusely, that they may not be wanting upon proper occasions. Accordingly, after Italic Capitals have been spaced all alike, it will soon appear which of them stands too near another; and which bears off too much; both which inequalities a judicious Workman rectifies by shifting and changing his Spaces till they seem to stand equidistant: though it is work that always turns out to a Compositor's disadvantage.

In Work of Poetry, it will recompence a Compositor's trouble to collect and to pick as many thick Spaces as he can, that he may space his Matter all alike, and not be interrupted by Spaces that are too thin to be put between open matter. On the other hand, it will be equally convenient to throw out thick Spaces, for Work that is spaced close, or where a Compositor has accustomed himself to space very close.

But,

But, after all these hints which we have been given about Spacing—What will they avail, if traversed by Alterations, which are too frequently made, *after* a Compositor has acquitted himself like a workman, in his functions? What will they avail, permit us to ask again—if Authors will not prepare and revise their Copy; but leave that till it comes to a proof-sheet; when, judging their first conceptions too insufficient for the support of their arguments, they betake themselves to striking out, changing, and adding, what their after-thoughts present to them—to such a degree, sometimes, that by improving their first ideas, the sense of the original Copy is often lost—the endeavours used in spacing frustrated, and Printing-charges augmented. But how these Gentlemen would do in case Providence had not stationed them on a spot where the liberty of Printing without Licence is enjoyed, is not difficult to guess; for the consequence would be, that they would digest and amend their first conceptions in such a manner as not to want alterations in a Proof; since in those parts where the Press is licensed, it is not allowed to make any, but to abide by the Copy as it is returned by the Censor. All the amendments, therefore, which an Author thinks proper of, are made in the original Copy; which, if it abounds with too many, is transcribed, that it may be fit to be perused by the licensing Officer; and afterwards to be put up among other Manuscripts that have passed the Press. But that we may not enter upon a prolix narration of what is concomitant to our premises concerning Copy, we will conclude this Chapter, with taking notice, that

BLACK LETTER consists of as many Sorts as a Common Fount of Roman; save that the first has two different r's, one of which is called the *ragged r* [1], and is particularly used after letters that round off behind, whether they be Capitals or Lower-case Sorts. Thus they are properly put after the following Capitals, viz. **B D G O P U W**; and after these Lower-case letters, viz. **b d h o p** and **w**.

The ragged r, of which we have taken this short notice, witnesseth, that the German letters owe their being to the Gothic or Black characters that were first used for Printing: for the Germans have a ragged r, which they call the *round r*; but which, in modelizing their letters to the present shape, they have castrated, by depriving it of its comely tail. But that they do not know the proper application of that letter, may be gathered from their using it in very close lines, instead of common r's, thereby to gain the room of a thin Hair-space. Which observation we have made on purpose to assist those who delight to exercise themselves in that painful study which attends writing *De Origine rerum*,

C H A P. V.

Of the Appurtenances to Founts of Letter.

TO give a Printing-house the epithet of *Complete*, amounts to no more than a compliment; since (in a strict and literal sense) no Printing-house can be said to be complete, unless it be provided with all the Fusil Materials for Modern and Antient languages.

But

But as it would be folly to attempt such a vanity that would only waste a man's substance, it is sufficient for a well-established Printer to be possessed of different Founts of Letter for the national language of the country where he is settled: and not to want such other metal utensils as are appurtenant to them, and of which some are so frequently used, as make them unavoidable. The necessary pieces of Typographical Furniture, therefore, are,

1. Two-line Letters.
2. Rules.
3. Braces.
4. Superior Letters, and Figures.
5. Fractions.
6. Quotations.
7. Flowers.

These being the more necessary parts of a Printer's Apparatus, we shall consider them in their order.

S E C T. I.

Of Two-Line Letters.

THE Two-line Letters that have been usually cast to regular Bodies are, Brevier, Long Primer, Small Pica, Pica, English, Great Primer and Double Pica, which Mr. *Caslon* has exhibited in his elegant Specimen, but Messrs. *Fry and Sons* have in a curious and later Edition of theirs, offered to the Trade three

Q

sizes

sizes more, viz—Pearl, Nonpareil and Burgeois, besides a Two-line Letter to their incomparable Diamond.

As for the rest, viz. Four lines Pica, and Five lines Pica, because they come not under the denomination of Two-line letters, they best become the name of Title-letters: for though they may serve for Initial letters upon several occasions, yet they seem to us too over-bearing to the mild aspect which Pica letter presents itself with.

Two-line Letters are cast to the full depth of their Body; but it is a fault that should have been taken notice of before now: for having such a deep Face, they descend below the line in which they should range, according to the different Bodies thereof: And that the excursion from that imaginary Line ought to be prevented, is confessed by a Compositor's taking care that a Fac shall not touch the letters under it; from whence it consequently follows, that Two-line letters should not bear upon letters under them: as they needs must do where they stand over Ascending letters, according to this sketch, viz.

m M m
m M m
bdhk

q M P
q M P
EMN

Though the excursion which our Two-line letters make, might be remedied, by putting a Scabbard *over* the beginning line of the Matter, and a bit of the same thickness *under* the Two-line letter; yet as this

would

would be attended with the loss of too much time to a Compositor, the most effectual way would be, to cast Two-line letters kerned, so as to hang over at their Heads, as much at least as they exceed at the Foot, and stand out of Line with the Letter of the Work.

To use full-faced Capitals upon every occasion where Initial letters are required, does not add to neatness, but rather lessens the same; especially in Work of narrow measure, and short Chapters, or other Divisions; in which case a proportionable thin-faced Capital is preferable to a full-faced one; which, if much worn, looks more like a *pied de mouche*, or a Paragraph before a Rubric, than a neat Initial letter.

The curtailing the J in our Two-line letters, gives it a diminutive look; not having the same free turn and comely Face which was originally given it; and therefore might have been left in its former shape, though it should run to the depth of three lines, on account of its tail,

S E C T. II.

Of Rules.

RULES are either Brass rules, Metal rules, or Space rules; whereof the first are made by Joiners, and the other two sorts cast by Letter Founders.

Brass rules ought to be exactly letter-high: If therefore Founts differ in height to paper they cannot be of

equal service in a Printing-house: for if they are higher than Letter, they come off black and broad; and besides hindering the adjoining letters from appearing, they cut both paper and tympan. On the other hand, if Rules are lower than Letter, they do not appear at all, especially if they are thin, and stand between matter without scabbards at their sides; which, though (in particular cases) they *may* be left out in Roman Letter; yet in mixt matter, or Italic, a Scabbard at least is required before and after a thin Brass rule, to prevent its touching upon *d f l* at the fore-side; and upon *f g j p ∫ y* at the hind-side.

Brass rules being commonly cut to the length of sixteen inches, their equality, as to height, from end to end, is not always to be depended on; and therefore should be tried; which is done by holding the foot, and afterwards the face-side of the whole length upon the Imposing Stone, and observing, whether light can be discovered betwixt the Rule and Stone; which if it appears, it proves the Rule faulty, and shews where it drives out in height, and occasions a hollowness in some other place.

The Face of Rules ought likewise to be considered, that it may be of an equal bold, or else tender look, according to the bigness of the Letter or Figures with which they are used. But we find a great difference in the Face of Rules, when we come to piece them; unless the Compositor endeavours to dress the shorter pieces so that they may not be distinguished from the mean length. But because piecing of Rules is often
attended

attended with considerable trouble, few Compositors chuse to shew their dexterity therein, till they are urged to it by the scarcity of them.

The thickness of Rules for Table-work should be proportionable to their Face, without so much Shoulder as shall hinder a cross rule to join a perpendicular line; since it is a maxim, ‘That Rules [in Table-work] shall fall upon and touch Rules’: which, if it is followed, makes Table-work look most agreeable.

Of Metal Rules.

METAL Rules, like Quadrats, are cast to m's, in such Founts as are commonly employed in Figure-work; which are cast to most of the small Bodies.

Metal rules are used in Schemes of Accounts, to direct and connect each Article with its summary Contents, where they stand opposite, and distant from each other: in which case all the different sizes of Rules are used, to prevent one rule falling upon another, especially of the same force; and to hinder their ranging, except the last in a line, which approaches the Figure-column within an m-quadrat, and by that means fall upon each other *behind*; though (on account of the different sizes) they do not range *before*.

Metal rules, sometimes, stand for *Noughts*, in Columns of Figures; where the Rule should not exceed the extent which figures require. Thus in a column of four n's, a two-m-rule is answerable to them; and
where

where the numeral contents of a column do not amount to above Hundreds, a three-n-rule will suffice, though for want thereof a column sometimes must be made wider, and n-quadrats thereby wasted: to prevent which, either three-n-rules, or else single-n-rules ought not to be thought usefess, unless it can be supposed that *every* measure is made to m's.

Metal rules of a neat cut, and curiously cast to stand in line, and join, are very useful in a Printing-house, considering that they serve not only for rectilinear but also perpendicular progressions, where no other rules are to touch them. But though they have shoudering sufficient to bear off the Matter, they require nevertheless a Scabbard, or, if it will admit, a Reglet before and after them, that they may run straight, and meet with nothing that can throw them out of line.

Sometimes a Rule stands for a sign of Repetition, in Catalogues of Goods, where it implies *Ditto*; and in Catalogues of Books, where a rule signifies *Ejusdem*, instead of repeating an Author's name, with the Title of every separate Treatise of his Writing: But, Note, that no sign of Repetition, no more than *Ditto*, *Ejusdem*, or *Idem* must be used at the top of a page; but that the name of the Author, or Merchandize, must be set again at length; and if their series continue, to denote the continuation thereof, at every article, by a rule of three or four m's, so as to range, instead of extending the rule to the different lengths of names.

At other times a Rule stands for *to*, or *till*; as, Chap. xvi. 3—17. that is, From the third *to* or *till* the seventeenth verse.

And

And at other times, again, a rule serves for an Index, to give notice, that what follows it, is a Corollary of what has preceded; or otherwise Matter of import and consequence.

Metal rules, when they serve for Leaders, are improperly used in the last line of an Article that is braced.

Of Space Rules.

SPACE Rules are not always cast to the same thickness; though two of them generally answer to the depth of a Pearl body. But their thickness is not of so much moment as their being of a neat look, and to join well; in which case they may be counted valuable Sorts in a Printing-house, considering that they not only save Brass rules, but also come off more equal, between columns of close matter; though they always appear best when they have the advantage of running between two Scabbards.

S E C T. III.

Of Braces.

BRACES are chiefly used in Tables of Accounts, and other such-like Matter that consists of a variety of Articles, which would require much circumlocution, were it not for the curious method of Tabular Writing, which is practised in England to greater perfection than in any other Nation.

Braces

Braces stand *before*, and keep together, such Articles as are of the same import, and are the Sub-divisions of preceding Articles.

Braces, sometimes, stand *after*, and keep together, such Articles as make above one line, and have either pecuniary, mercantile, or other posts after them; which are justified to answer to the middle of the Brace; thus.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
To 601 <i>lb.</i> weight of Letter, at	}	45	1 6
18 <i>d.</i> <i>per lb.</i>			

Where Matter is not braced in, the Sum thereof runs out at the last line of each Article; thus,

To 601 <i>lb.</i> weight of Letter, at						
18 <i>d.</i> <i>per lb.</i>	—	—	—	45	1	6

The bracing side of a Brace is always turned to that part of an Article which makes the most lines.

Braces are sometimes used in the Margin, to cut off a Chronological Series from the proper Notes of the Work.

Table-matter is generally braced in, when it wants driving out in width; thus,

A	—	—	—	—	—	200	}	500
B	—	—	—	—	—	300		

Whereas for driving down, we use the following method, viz.

A

A	—	—	—	—	—	200
B	—	—	—	—	—	300
						<u>500</u>

Sometimes the sums of separate Articles are run out, and braced together, to collect them into an aggregate sum; thus,

A	—	—	—	200	
B	—	—	—	300	
				<u>500</u>	
C	—	—	—	400	} 1400
D	—	—	—	500	
				<u>900</u>	

And sometimes both the primary and secondary sums are braced in, and the aggregate collected from the last of the two; thus,

A	—	—	—	200	}	500	}	1400
B	—	—	—	300				
C	—	—	—	400	}	900		
D	—	—	—	500				

Braces are generally cast to a Long Primer Body; of which the deepest answer to four lines of that Letter; if larger are required, they are supplied by Rules Middles, and Corners.

Middles and Corners, as well as Rules, are the test of a Founder's carefulness; both requiring the same accuracy, to make them seem to be of one piece. And as to dressing them, their shoulders should be planed
R
away

away so that no Bearding might be apprehended, should they even stand exposed: on which account they are cast to all the most useful sizes.

Middle and Corners are very convenient in Genealogical Work, where they are used the flat way; and where the directing point is not always in the middle, but has its place under the name of the Parent, whose offspring stands between Corner and Corner of the bracing side, in order of primogeniture.

Braces, sometimes, are used instead of Rules, especially in Titles of books, where the Heads of the principal Parts are recited in two columns that do not exceed the depth of a Brace; when two of them are put this way; viz.



S E C T. IV.

Of Superiors.

BECAUSE we have already been speaking of Superior Letters and Figures, in our Section of *References*, we shall say the less of them here; and therefore only observe, that Superior Letters should contain no more than the Alphabet, without j f v, and the Double letters. We also take notice, that in casting Superior Letters, a larger number should be cast of the first eight Sorts; a less of the second eight Sorts; and a still less quantity of the third eight Sorts; because

because it is often that References begin with *a* in every page; though sometimes they are continued to the end of a Chapter, or other division of a work; in which case they may run the length of an alphabet, and more. But to make amends for this reduction, notice should be taken to cast a larger number of *d h l o t y* than of the other Sorts, especially of *o*, which serves for other purposes, besides being a Reference; and therefore requires more than double the number of a letter of the first class.

The same may be done to the Nought of Superior Figures, and a larger quantity cast of this than any other Sort: Nor would it be wrong, were the three First figures, and especially the figure One, to exceed the others in number.

S E C T. V.

Of Fractions.

FRACTIONS, or Broken Numbers in Arithmetic, are seldom cast to any other Bodies than those of Pica, and Long Primer; and therefore the first is equal to two Nonpareil Bodies; and the other to two Pearl.

The *Separatrix*, or rule between the Numerator and Denominator, is in some Fractions joined to the foot of the first: but of late it has been considered that the figures 3 4 5 7 9 are thereby cramped, and for that reason it is now cut to run in the Top-line of the de-

nominating figure; which is an improvement not undeserving to be taken notice of.

The goodness of Fractions does not consist in their having a small and fine Face; but rather in shewing themselves full and clear.

Where Fractions are wanting, a Division serves to distinguish the Numerator from the Denominator, by putting it thus; viz. 3-8 12-63 16-50, though some other symbol might serve better for the purpose; and therefore we propose one that is similar to an Italic *l* inverted, and whose figure takes in the whole depth of its body; which then would have this resemblance; viz. 315 12163 16150. And as to the thickness of this Divider, we think it should not exceed that of an n-quadrat, but rather join closer to the figures.

Where a Fraction happens with large-bodied figures, such as Great Primer, and upwards, it is set out at length, or else made of suitable figures, or after the above methods,

S E C T. VI.

Of Quotations,

THE name of these quadrats tells us, what they formerly were used for, viz. To receive all such matter as was heterogeneous to the text. Hence we see in the productions of former Printers, that they delighted in seeing the pages lined with Notes and Quotations; which they enlarged on purpose, and contrived

contrived to encompass the pages of the text, that they might have the resemblance of a Looking-glass in a frame. By thus crowding the pages with Notes, they could not want so many Quotations as we do at present: now we are convinced, that too many Notes are of no advantage to work that is to be called *curious*; for the Notes being always considerably less than the text, either this will appear too pale, or the other too black; and for this reason those who have a notion of Printing, avoid writing many side notes.

Quotations require to be dressed and finished as carefully as any other Sort, that they may stand true upon all occasions, either single-broad; or double-broad; single-narrow, or double-narrow, and in any other measure.

Quotations in a Printing-house ought to have been all cast in the same Mould, to the height of common quadrats: but because their height is not limited, we judge that it ought not to exceed the depth of four m's of Pica; for if they are higher, they will be in the Press-man's way, and in danger of the Hammer; to which they are most exposed where they serve for White-lines.

Quotations are always cast hollow; yet so various is their hollowness, as well as height, that when a pound weight of some is worth the usual price, the same weight of others deserves not half the value, if they are calculated for the consumption of Metal more than for use,

Quotations are now cast perforate for the water to run off that gets into their cavities : but most Compositors put the bottom of a Quotation uppermost, that the water may more easily run off the Groove of the quadrat.

Justifiers, as well for broad as narrow Quotations, are cast, from Double Pica to all the regular Bodies, even Pearl inclusive : but the two smallest sizes, Nonpareil and Pearl, are seldom used, unless in a crowd of Notes.

It is worthy of remark, that the Quotations of Messrs. *Fry's* Foundry are cast to a Canon Body one way, and Two-lines Great Primer the other, and may be justified by Hair-spaces of those sizes.

Justifiers are often made scarce, by being used with common quadrats, and not returned after they have done service.

S E C T. VII.

of Flowers.

FLOWERS are cast to all the Regular Bodies of Letter, from Four-lines Pica to Pearl inclusive.

Flowers being cast to the usual Bodies of Letter, their size should be proportionable to the Face of the characters.

Flowers being either of a rectilinear, angular, circular, or square shape, they are used accordingly in making them up for Head-Pages ; in which case
angular

angular Flowers best suit the top and bottom lines ; lineal or square ones next ; and those of a circular turn, in the middle ; which, having no counter-flower, it is a maxim with some, to make all the other line circumambient, or inclosing that in the centre : but tho' this may be judged needless, it cannot be said to be unnecessary that the top flower should surround and inclose the rest on all sides. But as the construction of flower-work entirely depends upon the fancy of a Composer, it would be presumption to direct him in this point : we therefore leave the displaying of Flowers to his own judgment, and to the variety of materials for this purpose.



C H A P. VI.

Of the Names of Letter; and the Bearings to each other.

AFTER we have endeavoured to speak of all the Sorts that are contained in a complete Fount of Letter, and made our observations upon the use and proper application of them; we think it now proper to mention, that each Fount is called by a particular name, whereby its Body is known; and that we have seventeen Bodies, or Degrees, to which all Letter is cast; the Names whereof are exhibited in the subsequent schème, viz.

	<i>Le gros Double Canon</i>
	<i>Le Double Canon</i>
1 French Canon	1 <i>Le gros Canon</i>
2 Two lines Double Pica	2 <i>Le Trismegiste</i>
3 Two lines Great Primer	3 <i>Les deux Points de gros Romain</i>
4 Two lines English	4 <i>Le petit Canon</i>
5 Two lines Pica	5 <i>Les deux Points de Cicero, ou la Palestine</i>
6 Double Pica	6 <i>Le gros Paragon</i>
7 Paragon	7 <i>Le petit Paragon</i>
8 Great Primer	8 <i>Le gros Romain</i>
9 English	9 <i>Le Saint Augustin</i>
10 Pica	10 <i>Le Cicero</i>
11 Small Pica	11 <i>La Philosophie</i>
12 Long Primer	12 <i>Le petit Romain</i>
13 Burgeois	13 <i>Le Gaillarde</i>
14 Brevier	14 <i>Le petit Texte</i>
15 Minion	15 <i>La Mignione</i>
16 Nonpareil	16 <i>La Nonpareille</i>
17 Pearl	17 <i>La Parisienne, ou Sedanoise</i>

Imperial

Real

1	Miffal	1	<i>Parys Romeyn</i>
2	Sabon	2	<i>Groote Kanon</i>
3	Canon	3	<i>Kanon</i>
4	Roman	4	<i>Dubbelde Auguftyn</i>
5		5	<i>Dubbelde Mediaan</i>
6	Text, <i>or</i> Secunda	6	<i>Dubbelde Deffendiaan</i>
7	Paragon	7	<i>Paragon</i>
8	Tertia	8	<i>Text</i>
9	Mittel	9	<i>Auguftyn</i>
10	Cicero	10	<i>Mediaan</i>
11	Brevier, <i>or</i> Rheinlænder	11	<i>Deffendiaan</i>
12	Corpus, <i>or</i> Garmond	12	<i>Garmond</i>
13		13	<i>Burgeois</i>
14	Petit, <i>or</i> Jungfer	14	<i>Brevier</i>
15	Colonel	15	
16	Nonpareille	16	<i>Nonpareil</i>
17	Perl	S	

Thefe

These are the Names which are given to the several Bodies of Letter that are cast into Founts; and are so called, because they are constituted of Upper and Lower Case Sorts: but whence each name in particular has its origin, or from whence their signification is derived, we are not sufficiently acquainted; neither is any thing come to our hands that might have assisted us to enter into a dissertation which perhaps may give satisfaction to some, and at the same time displease others, who would think it a barren subject. In the mean time we have exhibited the names of the different Bodies of Letter in their descending order, and according to the proper appellation which is given to each of them in England, France, Germany, and Holland, that by comparing one with the other, we may try to account for the names of some, though we shall not attempt the definition of all of them, considering that we have nothing but suggestion for our guide; which nevertheless may chance to find its supporters.

Accordingly, *French Canon* is confessed to have been first produced by some Artist of that Nation; and employed in some Work relating to the Canons of the Church; to which the German title *Missal* likewise alludes.

The Sizes marked 2 3 4 5 6 have their names from the respective Bodies, of which the depth of two m-quadrats answers to one of the double Sizes. But we chuse not to proceed, before we have taken notice, that our *Double Pica* size falls in with what the Germans call *Secunda*; from which it follows, that there
should

should be a *Prima*: but because we have met with no Letter of that name, we conclude, that *Prima* being a size larger than *Secunda*; and happening to answer afterwards to Two Lines English, *Prima* lost its first name, and was turned into that of *Roman*. But besides that Double Pica goes in Germany by the name of *Secunda*, that Letter is also called *Text*; but as we cannot assign the reason for it, we leave it to the frequenters of Libraries to observe, which of the primitive books has its Text printed in that character.

Paragon is the only Letter that has preserved its name, being called so by all the Printing Nations. Its appellation shews, that it was first cut in France; and at the same time gives us room to suppose, that the State of well-shaped Letter there was at that time but indifferent; because when *Paragon* happened to turn out a Letter of better shape than the rest, it received the name of *Perfect Pattern*—which the word *Paragon* implies.

Great Primer is called *Tertia*, in Germany: and is therefore one of the major sizes of Letter which in the infancy of the Art served for printing several Works of consideration, and particularly the Bible; on which account it is by some called *Bible Text*.

English is called *Mittel*, by the Germans; and *St. Augustyn*, by the French and Dutch; both which names would be productive of considerable Articles in the Art of Printing, were some able hand to enlarge upon the sketches which we shall give about them. Accordingly, the word *Mittel* bearing the same meaning with Middle, it tells us, that the former Sizes of Let-

ter were seven in number, of which English was the middlemost; having *Prima*, *Secunda*, and *Tertia* on one side, and *Pica*, *Long Primer*, and *Brevier* at the other. And as to the name of *St. Augustyn*, which the French and Dutch give it, it informs us, that the writings of that Father were the first Works which were done in that size of Letter: but whether the first, or the other have a right to claim the honour of the performance, we leave to those who are better acquainted with the Anecdotes of Printing, and who harbour no partiality in deciding an argument in question.

Pica is another Letter that admits of having particular notice taken of it, on account of its being called *Cicero* by the French and Germans: for as the preceding Size was distinguished by the name of *St. Augustyn*, so has this been honoured with that of *Cicero* on account of the Epistles of that Writer having been first done in this size of Letter; in which we are not left to mere conjectures, but have Tradition on our side: for, ever since the year 1704 we remember to have heard it asserted by a Compositor who was then above seventy years of age; and who could have no other authority than, 'That he heard it from others.' Could we therefore trace this relation two or three lives back, we should come to the time when it was a known thing. In the mean time this instance has enabled us to make such conjectures about the names of Letter, that, had they been offered before, they would have given more light to the Writers about Printing; and would have been of help to decide the controversy, Whether the
Germans

Germans or the French were the first who dedicated this Body of Letter to the name of *Cicero*, on the before-mentioned account.

Small Pica being of an irregular Body, it takes its name *here* from its inferiority to *Pica*. But in France they assign the invention of this Body of Letter to *Philosophy*; for which, indeed, they may have their reason, considering that their *Cicero* and *Philosophie* are of one and the same Face; from which we conclude, that *Small Pica* has not been thought *there* worth cutting with a Face proportionable to its Body; and that the cramping of *Cicero* to *Philosophie*, was done with no other view than *to get in* upon the former. This we venture to suggest; though we can form no ideas why the Germans give this Letter the name of *Brevier*.

Upon the same supposition, that some Bodies of Letter took their names from work in which they were first employed, we are induced to believe, that the Germans gave the name of *Corpus* to this character, on account of their *Corpus Juris* being first done in this size; as it is still continued in that Letter: but, whether *Garmond* is the name of its Author, or what signification else it bears, we have no items of. In contradistinction of the French *Gros Romain*, they call this size of letter *Petit Romain*, conformable to the distinction that is made between Great Primer and Long Primer, in England.

Burgeois is a Letter of an irregular Body, and has been hitherto received accordingly. By its name it seems

seems to have first come from France; and that it was dedicated to the Master Printers there. *Gaillarde* is a Letter of the same Body; but has the Face of *Petit Romain*.

Brevier had its name from being first used for the *Breviary*, a Roman Catholic Church-book, which is commonly printed in this character. It is also called *Petit*; and *Jungfer*, or *Maiden Letter*, by the Germans, on account of its comeliness; to which, and their smallness, the names of *Minion*, *Nonpareil* and *Pearl* allude.

Thus have we attempted to make our conjectures concerning the names of the different Bodies of Letter that are cast into Founts, in hopes that our want of materials for this subject will be taken notice of, and therefore cleared up by some able Genius, in order to rescue these inscriptions of Typographical Monuments from being entirely obliterated.

Of the Proportion, or Bearing of one Body of Letter to another, as to Depth.

IN the beginning of this work we took notice, that each Body of Letter is not always cast to the same size; but that they differ in their depth; and that therefore no certain number of lines can be assigned to the length of half a foot. This we often perceive when a book is re-printed from a Copy, whose prior Edition was done in a House where the size of Letter in the first Edition, differs from that used in the second;

second; and therefore shews it, by making the Page of the last either longer or shorter than that of the first. We shall now pursue the second part of this chapter, by shewing the Proportion that one Body of Letter bears to another, as to Depth. But because this article has a great affinity to the subject of *Castling off Copy*, we shall enlarge this part of the Chapter by shewing the different methods that are used, to know how much a parcel of Copy will make, that is to be printed in a Letter of any Body, and Size: in which we hope to acquit ourselves to the satisfaction of our Readers, after we have shewn the difference of Letter, as well in Depth as in Width, by the following Schemes, viz.

SCHEME I. Shewing the difference there is between the several Bodies of Letter, as to Depth, from Great Primer to Brevier, inclusive.

[illegible]

According

According to this Scheme, which shews the Sizes of Letter in their Descending order.

Gr. Pr.		Eng.		Gr. Pr.		Eng.
4	==	5		32	==	40
8	==	10		36	==	45
12	==	15		40	==	50
16	==	20		44	==	55
20	==	25		48	==	60
24	==	30		52	==	65
28	==	35		56	==	70

Eng.		Pica.		Eng.		Pica.
9	==	10		54	==	60
18	==	20		63	==	70
27	==	30		72	==	80
36	==	40		81	==	90
45	==	50		90	==	100

Pica.		Sm. P.		Pica.		Sm. P.
7	==	8		56	==	64
14	==	16		63	==	72
21	==	24		70	==	80
28	==	32		77	==	88
35	==	40		84	==	96
42	==	48		91	==	104
49	==	56		98	==	112

Sm. P.		Lg. Pr.		Sm. P.		Lg. Pr.
14	=	15		98	=	105
28	=	30		112	=	120
42	=	45		126	=	135
56	=	60		140	=	150
70	=	75		154	=	165
84	=	90		168	=	180

Lg. Pr.	Bur.	Lg. Pr.	Bur.
7 ==	8	56 ==	64
14 ==	16	63 ==	72
21 ==	24	70 ==	80
28 ==	32	77 ==	88
35 ==	40	84 ==	96
42 ==	48	91 ==	104
49 ==	56	98 ==	112

Lg. Pr.	Bre.	Lg. Pr.	Bre.
4 ==	5	44 ==	55
8 ==	10	48 ==	60
12 ==	15	52 ==	65
16 ==	20	56 ==	70
20 ==	25	60 ==	75
24 ==	30	64 ==	80
28 ==	35	68 ==	85
32 ==	40	72 ==	90
36 ==	45	76 ==	95
40 ==	50	80 ==	100

Bre.	Bur.	Bre.	Bur.
9 ==	8	72 ==	64
18 ==	16	81 ==	72
27 ==	24	90 ==	80
36 ==	32	99 ==	88
45 ==	40	108 ==	96
54 ==	48	117 ==	104
63 ==	56	126 ==	112

50	=	40		25	=	20
45	=	36		20	=	16
40	=	32		15	=	12
35	=	28		10	=	8
30	=	24		5	=	4

Bur.		Lg. Pr.		Bur.		Lg. Pr.
112	=	98		56	=	49
104	=	91		48	=	42
96	=	84		40	=	35
88	=	77		32	=	28
80	=	70		24	=	21
72	=	63		16	=	14
64	=	56		8	=	7

Lg. Pr.		Sm. P.		Sm. P.		Lg. Pr.
180	=	168		90	=	84
165	=	154		75	=	70
150	=	140		60	=	56
135	=	126		45	=	42
120	=	112		30	=	28
105	=	98		15	=	14

Sm. P.		Pica		Sm. P.		Pica
112	=	98		56	=	49
104	=	91		48	=	42
96	=	84		40	=	35
88	=	77		32	=	28
80	=	70		24	=	21
72	=	63		16	=	14
64	=	56		8	=	7

Pica.		Eng.		Pica.		Eng.
100	=	90		50	=	45
90	=	81		40	=	36
80	=	72		30	=	27
70	=	63		20	=	18
60	=	54		10	=	9

Eng.		Pr. Gr.		Eng.		Gr. Pr.
60	=	49		30	=	24
55	=	45		25	=	20
50	=	40		20	=	16
45	=	36		15	=	12
40	=	32		10	=	8
35	=	28		5	=	4

The two preceding Schemes are drawn out, to shew, where one Size of Letter falls even with another, whether in the Ascending, or Descending order: Thus, every ninth line of English falls even with each tenth line of Pica, and so on, in the Descending order, according to the first Scheme: and so likewise [by reversion] every ten lines of Pica occupy the same place with nine lines of English, in the Ascending order, pursuant to the second Scheme.

Of Casting off Copy.

TO cast off Manuscript, is unpleasant and troublesome work, which requires great attention; and therefore ought not to be hurried, but to be done with deliberation. The first thing that is to be done towards Casting off, is to examine the Copy thoroughly, and to take notice, whether it is written tolerably even,

or

or whether it varies, and is sometimes close, and then wide; or small in one place, and large in another: Whether it has Insertions, either interlined, or in the margin; and whether it is much intermixed with Italic: nor must the Heads, Breaks and other incidents, be passed by unobserved. In thus looking over the Copy, and observing the mean run of it, we make some mark when we observe the Manuscript to be written closer, or smaller than the mean Writing; and some other mark, where we perceive it to be wider and larger than ordinary; that by these means we may allow accordingly, when we come to the places that are differently marked.

These necessary preparations being made, we look in our Copy for some that runs even, and which seems to be of the mean hand-writing. Then, having made the measure for the Work, we set a line, in the Letter that is designed for it, and take notice, how much Copy is come into the line in the Stick; whether less, or more than a line of Manuscript. And as it is seldom that neither one nor the other happens, we make a mark in the Copy where the line in the Stick ends, and number the words that it contains. But because this is not the safest way for casting off close, we count not only the syllables, but even the letters that are in a line in the Stick; of which we make a memorandum, and proceed to set off a second, third, or fourth line, till a line of Copy falls even with a line in the Stick. And as we did to the first line in the Stick, so we do to the other; marking on the M.S. the end of each line in the Stick, and telling the letters

letters in each, to see how they balance against each other. This being carefully done, we begin counting off each time as many lines of Copy, as we know will make even lines in the Stick; saying within ourselves, for example, if 2 lines of Copy make 3 lines in print; then 4 make 6; 6 make 9; 8 make 12; and so on; calling every two lines of Copy three lines in print.

In like manner we say, if 4 lines make 5; then 8 make 10 and so on; comparing every four lines of Copy to five lines in print.

And in this manner we carry our calculation on as far as we have occasion; either for Pages, Forms, or Sheets.

The foregoing items for calculating, are intended to serve where a line of Print takes in *less* than a line Copy; and therefore, where a line of Print takes in *more* than a line of Copy, the Problem is reversed; and instead of saying, If 2 lines make 3, we say, in this case, If 3 lines of Copy make 2 lines in Print, then 6 lines make 4; 9 make 6; 12 make 8, and so on; counting three lines of Copy to make two lines in print. And in this manner we carry our calculation to what number of Pages, Forms or Sheets we will; remembering always to count off so many lines of Copy at once, as we have found they will make even lines in the Stick. Thus, for example, if 5 lines make 7, the progression of the figure of 5 is, 10, 15, 20, &c. and the progression of 7 will be 14, 21, 28, &c.

In counting off Copy after this manner, we take notice of the Breaks; and where we judge that one will drive out, we intimate it by a mark of this \angle or this [shape; and again, where we find that a Break will get in, we invert the mark, thus \rhd or thus].— And to render these marks conspicuous to the Compositor, we write them in the margin, that he may take timely notice of, and keep his matter accordingly.

We also take care to make proper allowance for Heads to Chapters, Sections, Paragraphs, &c. and mention in the margin what Depth of lines is left for each, in case their matter varies in quantity.

In examining the state of the Copy we must observe whether it has Abbreviations, that we may guard against them in casting off, and allow for them according to the extent of the respective words, when written out at length.

Italic being a Letter commonly thinner than Roman, ought likewise to be taken notice of. But before we attempt this accuracy, we examine the Italic, by putting an alphabet of Roman Lower-case letters into a Stick; and one of Italic upon it, to see, whether the difference of the last is so considerable as to require an allowance to be made, on account of its getting in: for Italic as well as Roman, being sometimes cut thicker and thinner in the Face, as well as cast thicker and thinner by the Founder, it may be, that what Italic gets in upon the Roman, is so trifling as not to deserve regarding, when we are attentive upon casting off, unless whole pages of Italic happen together;

together ; in which case we make proper allowance for its getting in ; as we would do to Black Letter, on account of its driving out ; which is very considerable ; and therefore must not be passed by unregarded in casting off, in matter that is even intermixt with Black ; for whereas an alphabet of the Italic in this work occupies the width of eleven m's and an n, Roman takes up twelve m's, and Black thirteen ; e. g.

æ æ æ æ æ æ æ æ æ æ æ n
 abcdefghijklmnopqrstuvwxyz.
 abcdefghijklmnopqrstuvwxyz.
 abcdefghijklmnopqrstuvwxyz.

Such is the circumspection that is used in casting off Copy, especially where every Column or Page is to be marked off ; which tho' it is very tedious, is nevertheless the safest way ; because if we fall into a mistake in one page, we may recover ourselves in the next : which cannot so easily be done by those who count the Copy off from one Chapter to another, or from Break to Break. But tho' this method sometimes happens to fall out tolerably to their expectation, they are as often deceived by it, especially in a long run of close Matter ; besides which, we do not find it is a more expeditious way for Casting off than the first : for the manner which the pursuers of this method observe, is the following ; viz. they count off their Copy to lines for Printing from one Chapter, Head or Break to another, taking notice how many lines each of the counted-off parts make : and having in this manner cast off all, or the greatest part of the Copy, they collect the several sums of lines into one ; which they reduce to

Pages ;

Pages ; the Pages into Forms ; and these into Sheets ; and thus they give a tolerable guess, how much the cast-off Copy will make, in the Letter and Size proposed for the Work : But to assign each Sheet, Half-sheet, or Page, its Matter, will be more difficult, and take more time, than marking off the Pages at first. Such casting-off therefore is next to *lumping* the Copy ; and no Compositor is to answer for the contrary effects thereof ; whereas when Copy is cast off close, and the Pages marked off ; the Compositor takes notice how his Matter runs ; and if he finds that it keeps not even with the Copy, he drives either out, or gets in, where he conveniently can, to shew that he has regard to what he is about ; but this precaution need not to be taken where Copy is cast off the other way. In the mean time, the before-mentioned method for casting off Copy ought not to be challenged ; because it serves several exquisite purposes : for a parcel of Copy being cast off for such Letter, Size, and Number of Sheets, may easily be known what it will make, either in a larger or smaller character than it was cast off for. But to explain ourselves the better upon this head, we will endeavour to demonstrate our Proposition in the following manner ; viz.

Suppose a parcel of Copy is cast off that promises to make 18 Sheets in Pica, at 38 lines long, and 20 m's wide.

Suppose this Copy is to be done in English ; the page 33 lines long, 18 m's wide. How much will the whole drive out ?

U

Answer,

Answer, Five Sheets, and 576 letters, or half a page.

The Pica has 40 letters in a line. 40 times 38 make 1520 letters; which are contained in 1 one page: 16 times 1520 make 24320; which is the number of letters in One sheet: 18 times 24320 make 437760; which is the number of letters contained in 18 Sheets of Pica, of the above-said demensions.

By proceeding in the same manner as above, we find, that a line of English Octavo of the before-said demensions, has 36 letters; One page 1188; One sheet 19008; and 18 sheets contain 342144 letters: The difference to Pica is, 95616 letters; which make 5 sheets and half a page more, in English—the quantity that has drove out.

And by using this method, we may readily know with certainty, how much any sum of letters will drive out in a larger character, and get in in a smaller; viz. By multiplying the number of letters in a line, with the number of lines in a page, to find how many letters are in a single page: then multiplying the produce by 2, gives the number of letters that are in a Form of Folio; by 4, for a Form in Quarto; by 8, for a Form in Octavo; and by 12, for a Form in Twelves. Then having well surveyed the Copy, and observed how one side of it runs with another, we begin to cast off for Forms, after the following manner; viz.

*If Four sides of Copy go to
a Form; then*

Sides		Forms
1	make	174
2		172
3		374
4	1	
5	1	174
6	1	172
7	1	374
8	2	
9	2	174
10	2	172
11	2	374
12	3	
20	5	
30	7	172
40	10	
50	12	172

*If 4 sides and a half go to
a Form; then*

Sides		Forms
1	make	279
2		479
3		273
4		879
5	1	179
6	1	173
7	1	579
8	1	779
9	2	
10	2	279
11	2	479
12	2	273
20	4	479
30	6	273
40	8	879
50	11	179

*If Five sides of Copy go to
a Form; then*

Sides		Forms
1	make	175
2		275
3		375
4		475
5	1	
6	1	175
7	1	275
8	1	375
9	1	475
10	2	
11	2	175
12	2	275
30	6	
50	10	

*If 5 sides and a half go to
a Form; then*

Sides		Forms
1	make	2711
2		4711
3		6711
4		8711
5		10711
6	1	1711
7	1	3711
8	1	5711
9	1	7711
10	1	9711
11	2	
12	2	2711
30	5	5711
50	9	1711

*If Six sides of Copy go to
a Form; then*

Sides	Forms
1 make	176
2	173
3	172
4	273
5	576
6	1
7	1 176
8	1 173
9	1 172
10	1 273
11	1 576
12	2
20	3 173
50	8 173

*If 6 sides and a half go to
a Form; then*

Sides	Forms
1 make	2713
2	4713
3	6713
4	8713
5	10713
6	12713
7	1 1713
8	1 3713
9	1 5713
10	1 7713
11	1 9713
12	1 11713
30	4 8713
50	7 9713

*If Seven sides of Copy go
to a Form; then*

Sides	Forms
1 make	177
2	277
3	377
4	477
5	577
6	677
7	1
8	1 177
9	1 277
10	1 377
11	1 477
12	1 577
30	4 277
50	7 177

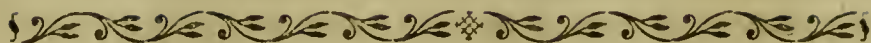
*If 7 sides and a half go
to a Form; then*

Sides	Forms
1 make	2715
2	4715
3	6715
4	8715
5	273
6	475
7	14715
8	1 1715
9	1 175
10	1 173
11	1 7715
12	1 9715
30	4
50	6 273

Thus

Thus far, we judge, will be sufficient to shew, that this Calculation may be carried on as far as occasion shall require. In the mean time it is to be observed, that what has been said and exhibited about Casting off, is understood of such Copy that is fairly and regularly written, as well as thoroughly revised.

The whole Copy being regularly written, Authors *revise* it; in doing which, they first agree with themselves, which way they would have their Work done; whether the common way, with Capitals to Substantives, and Proper names in Italic; or whether without Capitals and nothing in Italic, but what shall be under-scored in the Copy; of which, and other circumstances, they give notice either at the sending, or delivering of their Copy. To shew the degrees of emphasis or stress of select words, they double-under-score them, for Small Capitals; and draw a single stroke under words which they design for Italic; and if they chuse no Capitals to every Substantive, they express the emphasis of a word by beginning it with a Capital letter; but they take care either to write, or to alter such an initial letter into a Capital; well knowing, that not every one can guess where an Author intends an emphasis, either in speaking, or in writing, unless he intimates it either by voice, or by distinction of letters in printing.



C H A P. VIII.

Of Distributing, and Laying of Cases.

DISTRIBUTING, or conveying the different Sorts of Letter to their respective apartments, is commonly the first of a Compfitor's Practical Exercises; though it would be found more safe and advantageous to master andⁿ man, where this custom sometimes traversed, and Composing made antecedent to Distributing; which depends upon a perfect knowledge of what is, or ought to be contained in each of the different Boxes in a pair of Cases: But because the disposition of Sorts differs almost in every Printing-house, more or less, it follows, that such irregularities must have their effects accordingly; of which we do not want for instances. The first that offers itself to our observation, is the loss which a Compositor sustains, every time he changes his place of work; for, being unacquainted with the the situation of each Sort, he is hindred, for some time, in his quick and ready way of distributing; which might be easily prevented, were it not for that empty plea, That *such* a disposition of Sorts is most proper, because it is the same at my Master's; whereas it would be more conducive to Uniformity, were Establishers of new Houses to follow the method which is observed in one or another of the principal Printing-houses, with respect to *Laying of Cases*.

Another

Another evil that results from disregard to the point under consideration, affects chiefly a master, in that some Compositors rather than charge their memory with the different situation of some few Sorts, transpose them into such Boxes as contain them at their last place of work; but whereby the disposition of letters, in *that* Roman Case at least, is destroyed; and the transposed Sorts not being replaced, the Boxes become receptacles of confusion: for the right Sorts being distributed upon, the undermost are rendered useless, because they are not expected to lodge in quarters that were not assigned them: and therefore, if the hidden Sorts happen to run short, they must be cast.

We repeat it, therefore, as our opinion, that it would prove a preservative to a clean pair of Cases, were they filled and provided with Letter for a new Compositor to begin his work upon; that by Composing *first*, he may acquaint himself with the contents of his Boxes, and be the better prepared for Distributing.

And now we have shewn the reasonableness of Composing being the *first* part of a Compositor's business in a new place of work; we may with the more freedom say, that it is unreasonable even to *permit* a beginner to attempt Distributing, till we are well assured, that he has acquired a competent knowledge as well of his Letters, as Boxes, by Composing. To make therefore a young Apprentice the sooner fit for Distributing, he should be told that there are some letters that resemble others; and at the same time be shewn how to distinguish one from another; viz. b from q, and d from

p, l from I, n from u, &c. And to try whether he has a perfect knowledge to distinguish such letters as are similar to others, let the young Compositor distribute a handful of broken matter into an empty Case; and, if upon examining, the before-mentioned Sorts are found in their proper Boxes, he may be trusted to distribute for himself. But before he proceeds, he should be cautioned;

1. Not to take up too much at first, that if he should break his handful, he may have the less Pie to distribute: which he is to do before he takes up a fresh handful.

2. Not to throw letters in with their Face downwards; because it batters them.

3. Not to distribute his Case too full; because it creates Pie: with other such admonitions a shall be of service to him.

Though it is common in distributing to begin taking up at the head of pages, and to hold the Face of the Letter towards us; as also with the two fore-fingers of our right hand to draw forwards as much of the Matter as we can conveniently hold between them and the ball end of our thumb; yet some Compositors chuse a contrary method; in that they begin taking up at the bottom of pages, holding the Face of the Letter from them, and using the thumb of their right hand to push forwards as much of the Matter, as their two fore-fingers can conveniently turn upon the ball end of their thumb: But which of the two has the advantage,

vantage, we cannot tell; because both are obliged to pursue the same thing: both must read and spell what they take between their fingers; and both must squabble and work the letters askew, to drop each Sort with more quickness into its proper Box.

Sometimes letters are more or less slippery in distributing, and their wetness affects the fingers, and thumb, by making them supple, and unfit for the nimble disposing of the former into their proper apartments; which commonly happens when a Form is not well rinsed, especially where the Letter is small, and old, and withal washed with old lye that has much ink in it; which makes it difficult to rince a Form so clean as to prevent Letter from being slippery. In such case we keep a piece of Alum in a convenient Box, to pinch it now and then between our fingers; which contracts the grain of the skin, and the dilated pores of the fingers again: or else we wet our slippery Letter with water which Alum has been dissolved in. But to save our fingers, without adhibiting this remedy, we use more than common pains in laying up a Form, the Letter whereof we apprehend will be slippery, for the above reasons. We do therefore not content ourselves with opening our Form well, and working the water into it till it comes off clear; but we lock the Form up again, and rear it, with the Face to the wall of the Sink, where we rince the back of the Form of what adheres to it of the old and inky lye that is sunk, and by locking up, forced down between the letters. And to do still more, we wash and clean our Letter-board so long till nothing remains that can add to the soil that shall drain from

between the Letter, after it has been unlocked again. This additional trouble in laying up particular Forms, has often been recompensed with making them fit for distributing, without any other help.

On the other hand, new Letter that is not well dressed, and harbours Burs or other irregularities, is apt to stick; and therefore we wet it with water in which Soap has been dissolved; which makes the letter glide freely from between our fingers. But when Letter sticks on account of having long stood in Chases, or being put up without rincing, our common way for opening it is, to power boiling hot water over it; and if that takes no effect after half an hour's soaking, we repeat the experiment, which then commonly succeeds.

Of Laying of Cases.

LAYING of Cases implies nothing else but filling them with Sorts of a new Fount of Letter. In laying of Cases we observe, whether they are whole, clean, and lined. If they are new they want lining, in course; unless we approve of the Joiners way of lining them; who paste blue paper all over the bottom, before they fasten the Frame of the Boxes on. But though this may do well enough for an Upper Case, where most Sorts are but seldom distributed; yet lining the Boxes of a Lower Case separately, and especially the whole and half Boxes there, is the much better method: for when the blue paper becomes damp by wet letters, it spreads its moisture, and affects the
 paste

paste, which being diluted, the blue paper soon decays, and occasions the bottom to warp, and to separate from the Boxes; whereas single linings may be taken out and changed as often as occasion may require. In lining therefore the whole and half-boxes of a Lower Case, we chuse found writing-paper, that has not been printed on; which we double, and fold the sides in, yet so that they may turn up a little against the sides of a Box, though least against the upper side. But as to the small or quarter-boxes of a Lower case, smooth wrapper, cut out into square Scantlings, something bigger than the circumference of each Box, makes good lining for them.

When we are about laying our Cases, we consider the weight of the Fount, that we may lay no more Sets of Cases than the Fount will carry on Hands: for to lay up too many Sets would be but weakening a Fount; though we have Seventeen Sets of Cases laid of the same Letter, to carry on the same number of Hands, upon the same Work; which shews the very uncommon Weight of that Fount.

Being now prepared with proper Cases, we begin to lay our Letter, filling each Box moderately with its Sort, and putting the rest up in their Coffins; in which every one follows his own judgment, and places them so as to find, without much trouble, the Sorts which he shall want to perfect, or to fill his Case again. Accordingly when we have filled our Boxes, we put the remaining Sorts by in the following manner, viz.

1. The Latin Sorts, c i m q u v x æ œ &, in a Basket.
2. The English Whole-box Sorts, a d e n o r t, in a Basket.
3. The Long-box Sorts, b f g l f f h w y, in a Basket.
4. The Quarter-box Sorts, æ ffl j z [ç), &c. in a Basket.
5. Accented Letters, Small Capitals, and Figures, in a Basket.
6. Capitals, Spaces, and Quadrats, in a Basket.

Though ranging the Sorts in this order should take up six Baskets at first, they will soon be reduced to less, if the Letter is making up; and to still less, after it has been made perfect; when all the dormant Sorts perhaps will go into one Basket. But instead of Baskets, well-established Printers provide Fount Cases, for holding superfluous Sorts, and such as do not always circulate alike; which cannot fail proving of service; and might be of still more benefit, were the Model of a Fount Case different from a common Lower Case, as to length and breadth, and not of such an extraordinary depth; whereby the bottom of the small Boxes is rendered inaccessible. Hence it is no great matter of astonishment, if a Sort should be counted wanting that cannot be got out of these inclosures without much trouble and loss of time, besides damaging the letters in getting them out by the help of a bodkin,

bodkin, knife, or other hurtful instrument. Neither can it be supposed, that after the Boxes of the several Sets are filled with them, all the remaining petty Sorts in a Fount Case should be wanted besides. The Plan of Fount Cases, therefore, calls for an alteration, if they are to be more useful than they are at present. But lest we should be thought too forward, by those who approve of the modern make of Fount Cases, we would be understood to mean here all along those of the antiquated contrivance, that confines their shape, and circumference of Boxes, to a common Lower Case, in every respect besides the profundity of the former.



A SCHEME of a Pair of Cases.

U P P E R C A S E.

A	B	C	D	E	F	G
H	I	K	L	M	N	O
P	Q	R	S	T	V	W
X	Y	Z	Æ	Œ	U	J
1	2	3	4	5	6	7
8	9	o	ç	hs.	fb	fk
ä	ë	ï	ö	ü	ft	k
â	é	í	ó	û		†
â	ê	ì	ò	ù	§	*

LOWER CASE.

[illegible]



C H A P. IX.

Of Composing.

COMPOSING is the mean and grand occupation of the person that has made himself perfect in the Art of ranging and digesting Fusil Types into that order and harmony in which they appear upon paper, when printed.

Composing is a term that includes several other exercises as well of the mind as body; for when we are said to Compose, we are at the same time engaged in Reading and Spelling what we are composing, as well as in taking care to Space and to Justify our Matter. But that we may observe a method in treating this Chapter of Composing, we will make our beginning with what goes immediately before it, and consists in making the Measure for the Work a Compositor is to go upon.

For making of Measures we have the best method here in England, where we use m's laid the flat way, for that purpose. But before a Compositor begins a Work, he is, or ought to be directed, how many m's wide, and how many lines long he is to make a page of it. Accordingly if our work is a Manuscript, we put the ordered number of m's into our Composing-stick, and fasten them between the Head and Cheeks of it, as tight as we are used to justify all our Matter. But if
it

it is printed Copy, and we are to keep to the same lines and pages, we do not content ourselves with having made our measure to such a number of m's as answer to the width of our Copy; but we compare the Face of the Letter in the Copy, and of the Letter before us: and examine whether they are of the same thin or thick cut; and whether they seem to be cast equally thick, or thin: to find out which, we look for a very close line in our Copy, which we set off, to see how it comes into the measure made to m's. Accordingly if we find that the Letter of our Copy is either cut or cast thicker than the Letter before us, and we apprehend that we shall be cramped to get in line for line where the matter runs close, we make our measure an n-quadrat wider, for our own convenience, and skrew our line up tight and stiff. On the other hand, if a close line comes freely into our measure, and admits of some Spaces besides, we judge that the Letter of the Copy is either cut or cast thinner than the Letter before us, and therefore make our measure an n-quadrat narrower, rather than to squander away Spaces, and prejudicing ourselves by setting wide and open.

Though it is common to make our measure by m's of the Letter on which the work is to be done, it would be nevertheless more advantageous, were it made a Rule, that *All* measures for Folio's and Quarto's should be made to m's of the English Body; *all* measures for Octavo's, again, to Pica m's; and *all* measures for Twelves, and less sizes, to m's of the Long Primer. And because in large Printing-houses it happens that

different Founts of the same Body, but not of the same Size, are sometimes employed, it is absolutely necessary to use always m's of one and the same Fount of Letter, to make our measures by: for which reason it would be proper to keep a sufficient number of English, Pica, and Longprimer m's in a convenient place, on purpose to make measures by. The benefit of such a regulation would soon be perceived, in saving the trouble of cutting Scabbards, Leads, Rules, &c. to several measures that differ sometimes not a common Space of each other, on account of the different Sizes of the same Body of Letter not filling the same measure alike full.

Having made and secured our measure, we look for a Setting Rule; which, if it answers exactly to the measure, serves to give us notice when our Stick by falling or other accidents has Given: otherwise we cut a Rule, to fit the measure exactly, by which we try our stick when it has had any casualties.

Being provided with a Case full of Letter, a true Composing Stick, and a square Galley, we go about Composing; but first look our Copy over, which we will suppose to be a manuscript. Accordingly we take notice whether it is written in Half Sheets, Whole Sheets, or in Quires: whether only one or both sides have writing on them; and whether each side, or each leaf only, have folio's. But what we look more narrowly for is, Whether the Copy is written fair and legible; and whether it is spelled and pointed according to the modern way. If therefore it happens that the Copy turns out to our liking, we wish the Work to
last

last long; whereas if it proves otherwise, we are glad to have done with it, especially if the Author should chance to be a humourous Gentleman, and unacquainted with the nature of Printing; for *then* a Compositor is obliged to conform to the fancy of his Author, and sometimes to huddle his work up in such a manner as exposes both him and his Master; whereas the Gentleman that pursues the elaboration of this Plan, and leaves the gracing of his Work to the judgment of the Printer, seldom finds room to be dissatisfied upon *that* score.

By the Laws of Printing, indeed, a Compositor should abide by his Copy, and not vary from it, that he may clear himself, in case he should be charged with having made a fault. But this good law is now looked upon as obsolete, and most Authors expect the Printer to spell, point, and digest their Copy, that it may be intelligible and significant to the Reader; which is what a Compositor and the Corrector jointly have regard to, in Works of their own language, else many good books would be laid aside, because it would require as much patience to read them as books did, when no Points or Notations were used; and when nothing but a close attention to the sense made the subject intelligible.

Pointing, therefore, as well as Spelling and Methodizing some Author's Copies, being now become part of a Compositor's business, it shews how necessary it is for Master Printers to be deliberate in chusing Apprentices for the Case, and not to fix upon any but such as have either had a liberal education, or at least are perfect in

writing and reading their own language, besides having a taste of Latin, and some notions of Greek and Hebrew; and, withal, discover a genius that is capable of being cultivated and improved in such knowledge as contributes to exercise the Art with address and judgment. Had this been always the aim and object of the Planters and Nurfers of our Art, Printing would make a more respectable figure, and be more distinguished from mechanical business. But the hopes of gaining by apprentices, make some (master) printers not concern themselves about capacity, but are contented with a lad that can read in the Bible, whom they think sufficiently qualified to compose Street Pamphlets and Half-penny Volumes. In the mean time the young man is injured: for, being out of his time, he is thrust upon the trade, empty and ignorant of what is required of a good workman. But that we may not go further in this digression, we will return to observing the most material circumstances, that come under the consideration of Compositors, in pursuing their business.

Having therefore taken notice of the state of our Copy, and knowing into what Heads and Sub-heads the Matter is divided, we fold and place one leaf or more of it before us, and begin our work, with composing as many lines as the length of our pages is to consist of, besides one line more, instead of the direction line; and then we cut a Scabbard or Riglet for a Gage, to measure and to make up all our pages by. But before we actually begin to compose, we should be informed, either by the Author, or Master, after what manner our work is to be done; whether the old way,

way, with Capitals to Substantives, and Italic to Proper names, or after the more neat practice, all in Roman, and Capitals to Proper names and Emphatical words. Accordingly if the first method is to be observed, we put a Capital letter, not only to all Substantives, but also upon the following occasions; viz.

1. After a Full-point, that denotes the conclusion of a Sentence; but not after one that stands for a mark of Abbreviation.

2. To Proper names of Men and Women; which are put in Italic besides.

3. To names of Kingdoms, Provinces, Cities, Mountains, and Rivers; which are put in Italic besides.

4. To names of Arts and Sciences; as also of those that profess them.

5. To names of Dignity and Quality, whether Ecclesiastical, Civil, or Military.

6. To names of Festivals.

7. To words that express the Title of the Subject.

On the other hand; if a work is to be done in the more modern and neater way, we pay no regard to put any thing in Italic, but what is underscored in our Copy; neither do we drown the beauty of Roman Lower-case Sorts by gracing every Substantive with a Capital; but only such as are Proper names, or words of particular signification and emphasis.

It being a rule to begin the first page of the work with the nominal part of it, and to set it off conspicuously besides, we consider the size of our work, and chuse

chuse a Head-piece for it; which we place at the top of the first page, and then set the Name of the work, by way of a Half-Title; each line in Letter a size less than we propose to use in the mean Title; which lines we branch out, with suitable distances between, yet so that we secure as much room, at least, as the depth of the Fac, besides two lines of Matter after it, does require. But the want of room for all this, sometimes obliges us, either to reduce the Head-piece, or else to contract the Head itself, and to lessen the Whites between.

Besides Head-pieces, Flower-pieces, and broad Slips that are used to dress the Head of the first page of the Body of the work, we are sometimes directed to set a Head off with nothing else but a double, or two double Rules; which we call, a *Plain Head*; but which Rules are not so readily applied as may be imagined; for they should be dressed so as to appear of the same Face, and of the same exact length; and with such distances between Rule and Rule, as shew a connexion to each other, and display that symmetry which they are capable of, provided they are under the management of a neat Compositor.

The first page being made up to the length of the number of lines of which it is to consist, we set the Direction line, that shews the first word of the next page. But because it is the first page of a Sheet, we put a Signature to it; and because it is the first page of the Body of the Work, we begin the series of Signatures with B; which is practised in England only, but not always observed neither, because sometimes the Body of a work is begun with A, conformable to the method of all

all other Printing nations; in which last case it will be difficult for a Compositor to alter his folio's by the Tables of them, unless he remembers at every Imposing, that the work was begun with A, and therefore he ought to advance his folio's to a whole sheet from what they are in the Table of folio's. Considering therefore that we begin the Body of *almost* every work with the Signature of B, it ought to be made a General rule, to begin the Body of *every* work with B; whereby the Table of folio's will be of real service to alter the figures of each sheet by.

In speaking of Signatures, it will not be impertinent to mention, that W is not used to serve for a Signature; and that it would be more proper to employ the consonant than the vowel U for that purpose; the V being of that original form as has given W its shape; whereas the open U is of a modern formation.

Signatures being always taken care to be put to the proper pages, our chief concern should be (as often as we are finishing a first page of a sheet) to consider, whether any thing else is to go into the Direction line of the first page in a sheet; for if the work makes several Volumes, each first page of the sheet expresses them respectively at the beginning of the Direction line: and if it is a work that is published in Numbers, the succession of them is carried on in the like manner; though we see no reason for making this encroachment upon the Direction line, when Proprietors are at the charge of printed Covers to each Number; which will serve to take off the reflection which hereafter possibly

possibly may be made, that Gentlemen in such times could not purchase a considerable Work, unless by small parcels.

Our first page having now its length to the Gage, the room which the Running title occupies is still to be filled up; which is done without much trouble, by driving the Head out so much more, unless it should be thought best to drive the Head-piece down as much as the Running title makes; which however is done but by few, especially where it is a Cut of a considerable proportion, as to depth. But where pages have Flower-pieces, Slips, or Rules at the head, it is customary to put the Folio, instead of the Running title over them.

We proceed now to the Second page; to which we begin to set the Running title, in proportion to the Letter of the work, and according to the quantity of matter, either in Capitals, Small Capitals, or Italic: for it is not often that Running titles are so concise as to admit of being set in Capitals; but are commonly divided into two lines; and sometimes made very troublesome to the Compositor besides, by crowding the Parts and Sub-parts of a work, such as Book, Chap. &c. into the corners of them; or by changing the Running title with the Head of every Chapter: in which cases, particularly, it would seem an ungenerous view in one who should dispute comprehending Running titles under our calculations concerning the merits of a work.

The Running title being set, we put a suitable distance between that and the Matter; and therefore consider

sider the Bearings off of our letters in the Running title: for if it consists of all Capitals that have no descending letters amongst them, and runs throughout the work, two Scabbards of a middling size will be sufficient to separate the Running title from the Matter; whereas two thick Scabbards will make no more than a proper distance, where Running titles are in Italic, or mixed with it, and withal have descending letters among them. But in this case, as in others, we have regard to proportion, and make a difference in distances, agreeable to the size as well of the Letter as Page.

The first page of the Work being settled, and the Running title begun with the Second page, we proceed to work in good earnest, and according to such rules as have been observed by Compositors that have been distinguished for the solidity of their judgment. But because we fear that we cannot enter upon mentioning even the most frequent Circumstances in Composing, without running into a prolixity that might offend some of our Readers, we will avoid it by giving a cursory sketch of the following instances, viz.

When we use a *Divisorium* (commonly called *Visorium*), we chuse to move it each time downwards, to compose what by that means appears from under the *Visorium*; because we find it more safe against Outs and Doubles, to compose from above it rather than under it.

In Composing we employ our eyes with the same agility as we do our hand; for we cast our eyes upon

every letter we aim at, at the same moment that we move our hand to take it up: neither do we lose our time in looking at our Copy for every word we compose; but take as many words into our memory as we can well retain; which we spell as we take up the letters for them; and having done with what we had taken into our thoughts, we give a glance to our Copy again, to furnish our memory with a fresh supply of words. But this can be done only in printed Copy, and in such Manuscripts as are written fair, and are free from Insertions and Interlineations; a bad-written or intricate Copy requiring a much longer and closer application of the eye, and keeping it continually upon the stretch. In the mean time, as often as we justify a line, we see whether we have taken wrong letters up, and change them accordingly.

In taking up a letter, we make our aim at one that lies with its Face towards the right hand, and with the Neck from us, that so we may take the letter up by the Head, and convey it nimbly into the Composing Stick, without hugging it between our fingers, or knocking it about the Stick.

If we are upon Work in our own, or such other language as we are well acquainted with, we take notice to correct or change such words as we are sure to be wrong. But this care is not acknowledged by every Author; for some obstinately refuse to trust to a Compositor's judgment, and rather propagate errors than permit a Printer to correct such faults as some Authors cannot mend, but rely upon the rectitude of the book from which they copied.

Where

Where work is divided into Heads and Sub-heads, the first are distinguished by Italic of a size larger than the Subject matter, if it is in Roman; whereas Sub-heads are set in Italic of the Body of the work: which is also done to Heads in work of larger Letter than English, and sometimes even in work of *that* size of Letter.

After a Fac, Flowered letter, and Two-line letter, it is customary to put the next letter a Capital, when the word consists of more than one syllable; whereas we set the whole word in Capitals, if it is a monosyllable. It would therefore have the appearance of a blunder, were we to follow the French, who often put a Capital after a Two-line letter, and the rest of the word in Small Capitals.

If a Fac or Flowered letter be deeper than the Composing Stick, we measure the exact width of it by Quotations, or common Quadrats; which we put into our Stick, and the Fac into the Galley, and then compose and empty each time so many lines as our measure in the Stick will allow, till we have composed so many as reach something beyond the Depth of the Fac, that by justifying it up to the lines, its touching the letters underneath may be prevented.

Capitals being ensigns of honour and dignity, we space, properly, all such Words as are set in Capitals, to set them off more conspicuously: and this we do not only to words at length, but also to such as are abridged; yet not to dates of years that are expressed by Numeral Capitals.

Where a line breaks off at the end of a Paragraph, we endeavour to make it of a tolerable length; and therefore keep some lines before a Break-line accordingly, that by driving out, or else by getting in, we may come to a handsome Break-line: for it is equally vexatious to a Compositor, whether a Break-line happens to be too short, or too long. And though it is very common with the French to begin a page with a Break-line whose major part consists of matter, it does not suit an English eye; for in such case we make a page either a line longer, or shorter, rather than see a piece of a line at the Head of a page. But at the same time that we regard this, we take care to hide the casualty in one page, by making the reverse side of the same length: for the *true* length of a page does not consist in its being filled up with Sticks and Quadrats to the mark of the Gage; but rather in making the last lines of an uneven and an even page to fall on the Back of each other: hence a page cannot be said to be of a right length, that has a Break-line at the bottom, with the Catch-word, or Direction, and sometimes even with a Signature in it. Nor is it elegant to suffer the penultimate line of a page to be a short Break-line, with a White-line between that and the Direction-line, to make the page answer the length of the Gage; but which does not excuse it from being called *too short*: that therefore it would be adviseable to desist from fancying it improper to make the First line of a paragraph the very last line of a page; of which all other Printing Nations make not the least scruple. But the method of putting a White between
the

the Direction and Matter that runs on, is a glaring instance of a Compositor's being either very ignorant of his business, or else eager after Fat; for the sake of which, some will hazard their credit, rather than lose a line that can be drove out, by Spacing, or otherwise.

Every First line of a new Paragraph, or Sentence that does not begin with a Two-line letter, we indent an m-quadrat, whatever size the letter of our work is of. In this Article of breaking off the Matter, Gentlemen vary, as in other instances: for some carry the Argument of a Position to a great length, before they relieve a reader in his attention, by breaking off a Paragraph; whereas others are so sententious in their writing, that they break off almost at every place that will admit of a Full-point. But in this as well as the preceding case we always follow a Gentleman's choice, unless the Printer, upon particular occasions, finds it necessary either to multiply or to reduce the Breaks in the Copy, where it may be done with propriety, in order to conduct the compass of a piece or fragment of work; in which case Gentlemen ought not to cross a Printer's judgment, by obstinately refusing to comply with the endeavours that are used to make work look uniform. In the mean time it is requisite for Writers to make the beginning of a new Paragraph always conspicuous to a Compositor, by indenting the first line thereof far enough to distinguish it from the preceding line, in case it should be quite full.

Though

Though our work should be done all in Roman, yet where words intervene of a foreign language, we put them in Italic, unless Authors will have them appear in their proper characters: in which case it is highly necessary such words should be written by themselves, fair and right, that they may be cut in wood accordingly; which, after it is done, will admit of no correcting.

Many more Hints, relating to Composing, might be added to these, for the information of Learners of our Art, were we not sure that Practice, and taking notice how things are done by Good Workmen, will be of more service to them than laying down Rules for managing Work properly; since this is the duty of him that has an Apprentice under his tuition; and therefore ought to forward him in every thing that can give him an early apprehension of his business; in which every generous man takes pleasure to acquit himself, provided he finds that his endeavours are bestowed upon a Youth that is not indocile, but besides capacity, shews an eagerness to become acquainted with the Principles of the Art, that he may practise the same with the more readiness to the satisfaction of his Master, and to the advancement of his own interest. Whatever Apprentice engages in a chosen profession upon these principles, cannot fail of succeeding in his emulation, because every one will be ready to satisfy his inquiries concerning business; whereas sluggish and indolent Youths, that discover an innate aversion to settled business, and take no advantage of their education, are left to themselves and their idle habit, that they may rue their negligence when they become less
dependent

dependent on their Master. To rouse such from the lethargy of their untowardness, we shall give ourselves no trouble: but it is for the sake of the former, that we conclude this Chapter with the following Observations, viz.

After the Body of a Volume is done, the Contents, sometimes, follow next, though they belong more properly to the beginning part of a Book; for which reason we shall defer speaking of them to another place. But what commonly is put after the Matter, is the Index; which is customary to be done in Letter two sizes less than that of the Work, provided the compass thereof, or other circumstances, will suit it.

We always begin an Index upon an uneven page, and put a Slip, or Double rule, at the Head thereof. And though we set Running titles to an Index, we rarely put Folio's to them; unless it is to recommend a Book for the extraordinary number of its pages: for as an Index does not refer to its own Matter by figures, they seem needless in this case. The Signatures, however, are always carried on regularly, to the last whole or half sheet of the work.

It is common to set the Subject word of each Article in Italic, and *all* the rest in Roman; indenting all the matter an in-quadrat that makes above one line.

If we find that we have room for it, we make a line of the word *Page*; which we justify to stand over the ends of the lines, where the figures fall: else we prefix the said word to the first figure or figures of each Page, or Column.

We

We take notice, whether the Subject words are ranged Alphabetically; and we transpose them and what belongs to them accordingly, if we find them otherwise, though it is not a Compositor's duty, especially where he has no expectation of being satisfied for it.

Where Figures have a regular succession, we put a Comma after each folio; and where their order breaks off, we use a Full-point. Thus, for example, after 5. 6. 7. 8. we put Comma's; whereas after 12. 16. 19. 24 we use Full-points. But to save Figures and Comma's, we denote a succession of the former by putting a Rule betwixt the first and last figures; thus, 5—8. Again, if an Article has been collected from two pages, the folio of the second is supplied by *fq.* or *sequente*; and by *fqq.* or *sequentibus*, where an Article is touched upon in different succeeding pages.

We put no Full-point after the last figures, because we judge, that their standing at the end of a line is a sufficient stop.

Neither do we put a Comma nor Full-point to the last word of an Article, in a wide measure and open matter: but it is not improper to use a Comma at the end of every Article, in narrow columns; or where figures are put after the matter, instead of running them to the end of a line.

If we have occasion to drive out, we put each leading letter of the Alphabet in a line by itself, with such distances before and after as do not look preposterous. On the other hand, if we apprehend that we shall want

room,

room, we begin the matter at the change of each Alphabetical letter with a lean-faced Two-line letter, and a White-line before it.

In case the Index fills the last sheet or half-sheet, the Work is said to be finished, though in reality it has not been begun, because the Title, Dedication, Preface, Introduction, Summaries, and whatever else precedes the Body of the work, are still to do; and are such Parts as try not only a Compositor's judgment, but also patience: for as to the Title, it is a Summary Relation of the mean subject on which the Work is founded: and though it consists but of one single page; yet to display its several members in such a manner that the whole may appear of an agreeable proportion and symmetry, is counted a masterly performance. And though setting of Titles is generally governed by fancy; yet does it not follow that the excursions of every fancy should be tolerated: else too many Titles would be taken to belong to Chapmen's books. It is therefore proper that Titles should have the revisal of one that is allowed to have a good judgment in gracing one. But to change and alter a Title, to the mere fancy of Pretenders, is the ready way to spoil it. When therefore we go about a Title, we consider as well the quantity as quality of our matter, that we may set out accordingly, and either branch our matter out to the best advantage, or else croud it together by way of summaries; but which cannot produce a handsome Title. But where the matter for a Title is so contrived that it may be divided, now into Emphatical lines, and then into short Summary articles, it is a

Compositor's fault, if his Title makes no proper appearance. Were it not that every Title differs from another in substance, it would not be difficult to lay down rules for their formation: but this being impracticable, the best method is, to take example by such Titles as are known to be well executed. To furnish one's self, therefore, with proper conceptions for setting Titles, Dedications, Heads, and many other odd fragments, a *Florilegium Typographicum* would be of great help, especially to such as have made an early beginning to collect, and to secure in a Book, all such Seraps as will be of service and pleasure to refer to. The like Repositories would also be of great convenience in Printing-houses of consideration, to inform a new comer how to do some work according to the method of the House, and to a Master's liking.

As Titles are governed by fancy, so they run upon mode and fashion: for different countries use different ways to display them; and for that reason we take a view after what manner Latin, French, Italian, or other foreign Titles are contrived, that have been done in their native countries; and keep to the genius of them: which consists in making them look open and airy; setting them off with some neat cut, rather than using large and gouty Letter for that purpose, especially in Latin Titles, the matter for which is commonly drawn up so that it will admit of being set all in Capitals; which, if they are properly varied according to their emphasis and signification, make a very agreeable parade. Of this the French are not ignorant, and seem inclined to dress their Titles all in Capitals,

were

were their Language as expreffive as the Latin. Nevertheless, to fhew their fondnefs for Capitals, they fet the firft line of a Titular Summary all in Capitals, where they make a better appearance than when they are feen ftragglng in fingle words among a feries of Lower-case matter.

After the Title of a Book follows the Dedication; which fometimes is but of one fingle page, and is branched out much after the manner of a Title; but when it has Matter of Addrefs with it, we commonly fet it in Letter two fizes larger than that of the Work; beginning it with a fuitable plain Capital letter, and putting fo much of the matter to the Dedication as fills the depth of the initial Capital, and, at the very leaft, one line after that, to cover the foot of the faid letter. We put neither folio nor any thing elfe over the very Dedication; nor a Direktion under the fame, though we cannot avoid putting a Signature, if it makes the third page of a fheet in Quarto, or leffer fize. But in Matter of Addrefs we make the word *Dedication* (in Italic Capitals of the fize before us) our Running title, without folios to the pages. And thus we go on till we come to the Compliment, for which we contrive to have room enough to make proper breakings off, that run out to the right-hand fide; after which we juftify the name of the Dedicator to the end of our Stick, within an n-quadrat, obferving to put at leaft double the diftance between the Compliment and Name, that is betwixt the divided lines. In this point other Nations, and efpecially the German, are very particular, becaufe they fancy, that fetting a Dedicator's name

in small Letter, and at a great distance, denotes a profound submission. Another circumstance that demands our attention, is to set the Name of an Author's residence, and the Date, to the left-hand side of the page, over against the bottom of the Compliment; yet so that they may not range against each other; which is the easier prevented, by setting this signature of place and time in small Letter, and indenting them one and two m-quadrats.

We come now to the *Preface*, which is a Discourse drawn up by an Author in recommendation of the Work. Formerly it was a rule to set the Preface in Italic; but at present we do not regard such punctilios, and rather study to make every part of the work witness a Compositor's endeavours to set it off to the best advantage. In pursuance of this, with the concurrence of a Master, we set the Preface in Roman, of one size larger than the Letter of the work; though sometimes we go to two sizes, especially where a Preface is but short, and where an *Introduction* follows after it. In the mean time we make no great shew at the Head of a Preface, but set it off either by a Slip, or a Double rule, and use either a Fac, or a plain Letter, accordingly. As to Running titles, the word *Preface*, commonly set in Italic Capitals (suitable to the size of the page) is sufficient: at the same time we remember to put folios in Numeral letters to our Running titles, beginning with [i] over the first page of a Preface, and continuing the rest in the usual manner. But because some chuse to put Numerals to Dedication matter, we appeal to superior judgment, whether they do not
make

make a Dedication part of a Work, in prefixing them to a Preface, or Introduction, and making a series of the folios of the Dedication, and of the Preface; which last we regard as appurtenant to a Work; whereas we judge a Dedication to have no relation to a Work, and therefore bearing no connexion with any part of it. This we silently confess, when we put no Signature to Dedication matter that has the General Title before it but comprehend that, and what else comes in, under the Signature of the Title-sheet, viz. *great A*; which makes the Bookseller's Alphabet (consisting of 23 letters) complete, provided that the Body of a Work is begun with B. To know therefore more readily how many sheets more a Book consists of than what are marked with Signatures in Capital letters, we put *Little a* to the first sheet after the Title-sheet, and thus carry our Lower-case Signatures on till the beginning of the Body of the Work.

What we have observed concerning Prefaces, may equally be said of Introductions, that are drawn up and calculated for the elucidation of their respective Works; whence Prefaces and Introductions have a great affinity, in that the one sometimes includes the other, and that they supply one another; whence both are treated alike, by Printers, as to setting off their Heads.

The Contents take place after the Preface, or an Introduction. They are always set in Italic, commonly of a size larger than the Letter of the work; the first line of each Summary full, and the rest indented an m-quadrat; with the referring figures justified to the ends of the respective lines.

What

What still remains to be taken notice of are the *Errata*, which sometimes are put immediately before the Body of the Work, and at other times after the *Finis* of it. Sometimes they are put by themselves on the even side of a leaf, so as to face the Title. But though this is very seldom done, it is pity that it should ever have come into the thoughts of any one to do it at all; for it is a maxim, to bring *Errata* into as narrow a compass as we conveniently can, and to put them in a place where they can make no great shew; since it is not to the credit of a book, to find a Catalogue of its faults annexed. It is therefore wrong policy in those who make *Errata* appear numerous, and parading, in hopes of being thought very careful and accurate; when they only serve to witness an Author's inattention at a time when he should have been of the opposite inclination. But the subterfuges that are used by Writers upon this occasion, are commonly levelled at the Printer, to make him the author of all that is amiss; whereas they ought to ascribe it to themselves: for, were Gentlemen to send in their Copy fairly written, and well corrected and prepared for the Press, they would have no occasion to apprehend that their work would be neglected, were they to leave the whole management thereof to the Printer, especially when it is written in his native language. But bad Copy, not revised at all by the Author, is one obstacle; and altering and changing the matter after it has been composed, is another means that obstructs the correctness of a Work; not to mention the several accidents to which it is exposed before it has passed through

through the hands of a Pressman. It would therefore be generous in Gentlemen to examine the circumstances that may have occasioned an Error, before they pronounce it a Typographical one: for whoever has any ideas of Printing, must consequently know that it is impossible to practise that Art without committing Errors; and that it is the province of an Author to rectify them. For these several reasons it will appear how material it is not to make an Erratum of every trifling fault, where the sense of a word cannot be construed to mean any thing else than what it was designed for; much less to correct the Punctuation, unless where it should pervert the sense. By this means, and by running Errata together in Brevier, or Long-primer at farthest, they would appear less odious to the eye, and not make a Book suspected.

Lastly, Where Errata are specified in a Book that is to be reprinted, care should be taken to mark every one of them in their proper places in the Copy, to avoid their being conveyed into the new Edition.





C H A P. X.

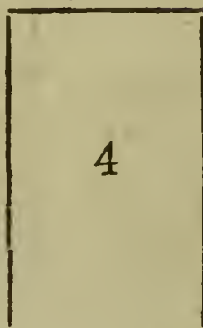
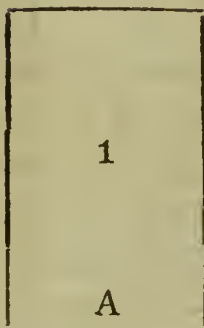
Of Imposing.

THE Article of Imposing comprehends not only the knowledge of placing the pages so that they may follow each other, after they are printed off, and the sheet is folded up; but also the way of dressing Chases, and the manner of making the proper Margin. Accordingly we shall have occasion to divide this Chapter into three Sections, that we may treat of the three Branches of this Article separately.

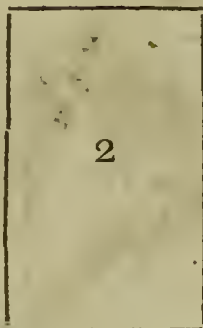
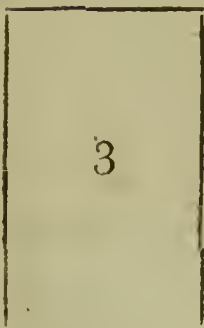
§ I. Having composed so many pages as go to a Whole sheet, Half sheet, or less Part of a sheet, of what size soever, we take them from under our Frame, and carry them to the Imposing Stone; taking care to put the First page in its right position, with the Signature either to the left-hand, facing us, as in Folios and Octavos; or to the right-hand, with the out-side of the page towards us, as in Quartos and Twelves, according to the following Schemes for Imposing.

A Single Sheet in FOLIO.

Outer Form.

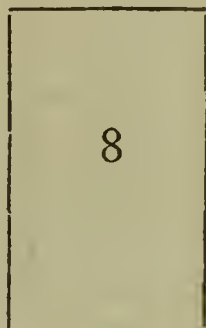
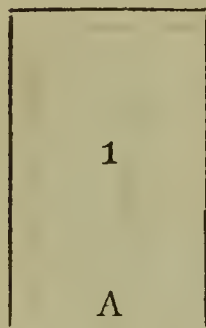


Inner Form.

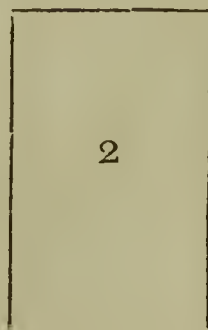
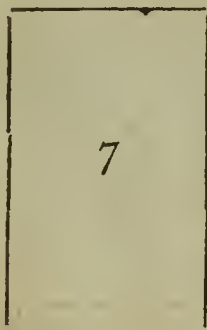


Two Sheets in Folio, Quired, or lying one in another.

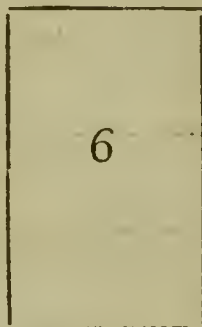
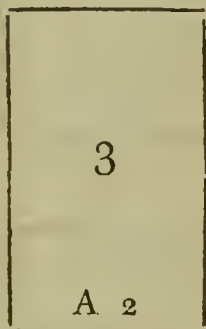
Outer Form of the Outer Sheet.



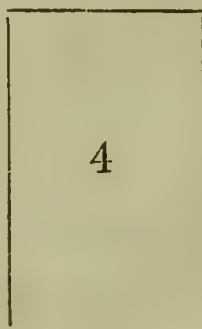
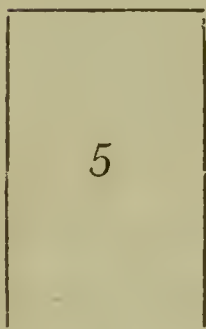
Inner Form of the Outer Sheet of Two Sheets in Folio, Quired.



The Outer Form of the Inner Sheet of Two Sheets in
Folio, Quired.

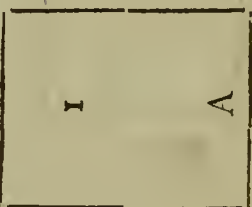
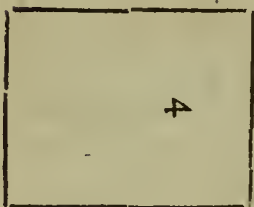
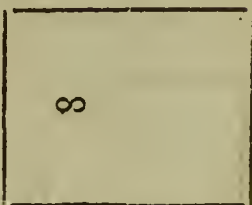
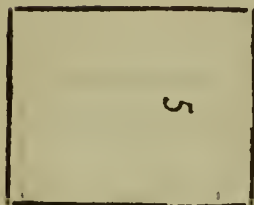


Inner Form of the Inner Sheet.



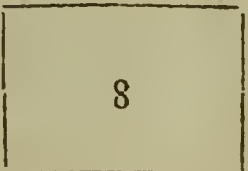
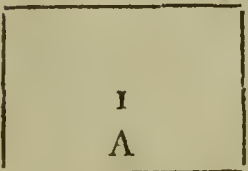
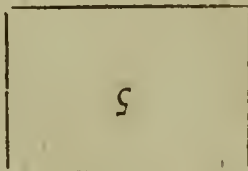
A Sheet of Common. QUARTO.

Outer Form.



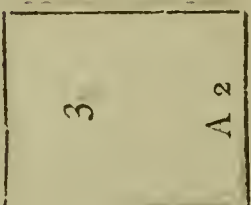
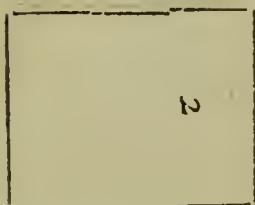
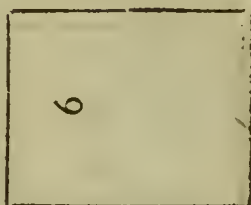
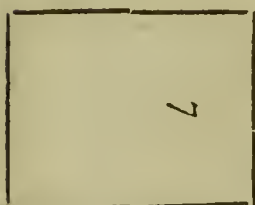
*A Sheet in Quarto, the Broad Way, commonly used
in Works of Music.*

The Outer Form.

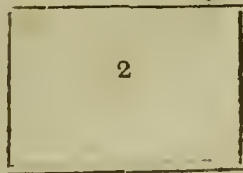
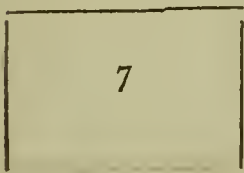
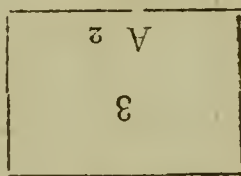
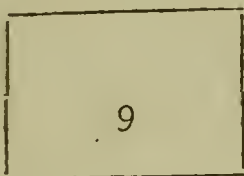


The

The Inner Form of a Sheet in Quarto.

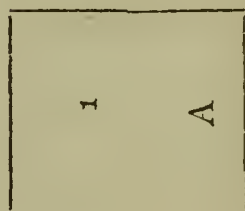
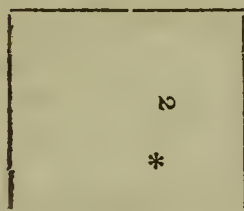
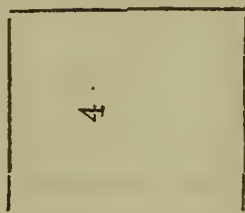
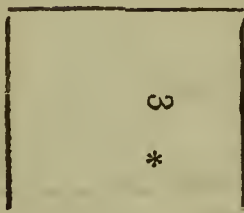


The Inner Form of Broad Quarto.

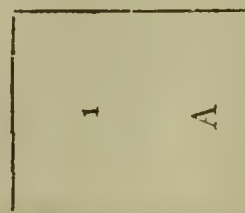
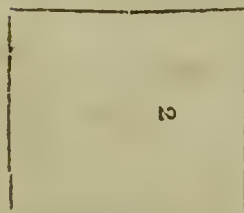
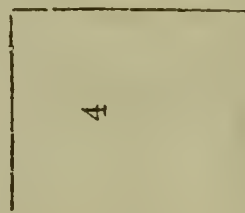
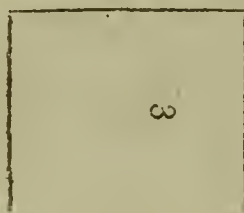


Two Half Sheets in Quarto, worked together.

Outer Form.

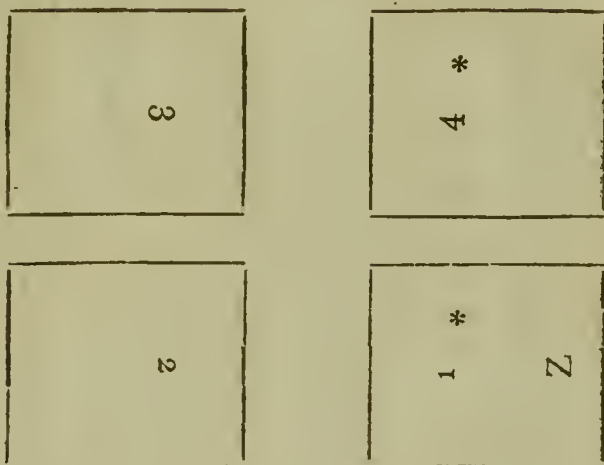
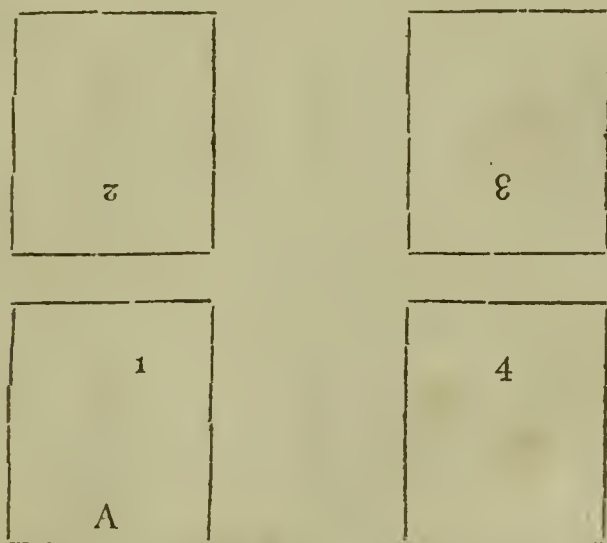


Half a Sheet of Common Quarto.



Inner

Inner Form of Two Half Sheets in Quarto.

*Half a Sheet in Quarto, the Broad Way.*

A Sheet of Common OCTAVO.

Outer Form.

8	6	12	A 3 5
1 A	16	13	4

A Sheet of Octavo, the Broad Way.

Outer Form.

13	12	6	9
4	5 A 3	8	V 1

Inner

Inner Form of a Sheet of Common Octavo.

9	11	10	V 4 7
3 A 2	14	15	2

Inner Form of a Sheet in Broad Octavo.

15	10	11	14
3	7 A 4	9	3 A 2

C c

Half

Half a Sheet of Common Octavo.

4	5	6	3 A 2
1 A	8	7	2

Two Half Sheets of Common Octavo worked together.

Outer Form.

4	5	8	B 1
1 A	8	5	4

Two Quarters of a Sheet of Common Octavo, worked together.

2	B 2 3	4	B 1
1 A	4	3 A 2	2

The Inner Form of Two Half Sheets in Octavo.

2	7	9	2 V 3
3 B 2	6	7	2

The Inner Form of a Sheet in Octavo—Hebrew.

<div> <div>SL</div> <div>L</div> </div>	<div> <div></div> <div>OI</div> </div>	<div> <div></div> <div>II</div> </div>	<div> <div></div> <div>9</div> </div>
<div> <div>2</div> </div>	<div> <div>15</div> </div>	<div> <div>14</div> </div>	<div> <div>3</div> <div>אב</div> </div>

The Inner Form of a Sheet in Twelves.

<div> <div>11</div> <div>A 9</div> </div>	<div> <div>7</div> <div>A 4</div> </div>	<div> <div>2</div> </div>
<div> <div>14</div> </div>	<div> <div>18</div> </div>	<div> <div>23</div> </div>
<div> <div>15</div> </div>	<div> <div>19</div> </div>	<div> <div>22</div> </div>
<div> <div>10</div> </div>	<div> <div>6</div> </div>	<div> <div>3</div> <div>A 2</div> </div>

A Sheet

A Sheet in Twelves, with Two Signatures.
Outer Form.

4	5 A 3	17 B
81	12	24
91	9	21
V 1	8	20

A Half Sheet in Twelves, with One Signature.

2	3 A 2	5 A 3
11	10	8
21	9	7
V 1	4	6

Inner Form of a Sheet in 12mo. with 2 Signatures.

2	7 A ₄	19 B ₂
5 ₁	10	22
4 ₁	11	23
3 V ₂	6	18

A Half Sheet in Twelves, with Two Signatures.

2	3 A ₂	9 B
7	6	12
8	5	11
1 V	4	10

A Sheet in SIXTEEN, with One Signature.

The Outer Form.

A 5 3	12	A 9 5	8
28	12	24	52
29	20	17	32
4	31	16	V 1

A Sheet in Sixteen, with Two Signatures,

Is imposed as Two Sheets of common Octavo, putting the First Signature for the one Half Sheet where A stands above; and the First Page of the other Half Sheet in the Place where the Fifth Page is, in the above Scheme.

The Inner Form of a Sheet in Sixteen, with one
Signature.

7 Λ 4	10	11	9
26	23	22	27
31	18	19	30
2	15	14	3

Half a Sheet in Sixteen, with One Signature.

3 Λ 2	6	5 Λ 3	4
14	11	12	13
15	10	9	16
2	7	8	V 1

A Sheet of EIGHTEENS, with Two Signatures.

Outer Form.

8	B ₃ 5	-	4	B ₅ 9	12	B 1
8	17	20	A ₃ 5	-	16	A ₅ 6
1 A	24	21	4	-	13	12

A Sheet of Eighteens, with Three Signatures.

Outer Form.

1 C	12	9	4	-	5 C ₃	8
1 B	12	9	4	-	5 B ₃	8
1 A	12	9	4	-	5 A ₃	8

Inner

Inner Form of a Sheet of 18mo. with 2 Signatures.

2	11	10	B ₂ 3	-	9	B ₄ 7
10	5	-	9	6	8	A ₄ 7
11	14	-	3 A ₂	22	23	2

Inner Form of a Sheet of 18mo. with 2 Signatures.

7 C ₄	6	-	3 C ₂	10	11	2
7 B ₄	6	-	3 B ₂	10	11	2
7 A ₄	6	-	3 A ₂	10	11	2

D d 2

Two

Two Half Sheets in TWELVES, worked together.
Outer Form.

5 A 3	9 A 5	12
8	4	1 Z
5 Z 3	9 Z 5	12
8	4	1 V

A Sheet of EIGHTEENS, to be folded up together.

13 B	24	21	16	17 B 3	20
12	C 25	28	6	8	3 C 62
1 A	36	33	4	5 A 3	32

Inner

Inner Form of Two Half Sheets in Twelves.

7 A ₄	3 A ₂	2
6	10	11
7 Z ₄	3 Z ₂	2
6	10	11

Inner Form of a Sheet of 18mo. without Cuttings off.

19	18	15 B ₂	22	23	14
30	7 A ₄	10	27 C ₂	26	11
31	6	3 A ₂	34	35	2

A Sheet

A Sheet of Eighteens, with One Signature.

Outer Form.

10	27	26	11 A 6	-	20	17 A 6
8	29	32	5 A 3	-	22	15 A 8
1 A	36	33	4	-	23	14

A Half Sheet of Eighteens.

14	5 a 3	10	9 a 5	-	6	13
4	15	12	7 a 4	-	16	3 a 2
1 a	18	11	8	-	17	2

Note. The White-Paper of this Half Sheet being worked off, the four lowermost Pages in the middle must be transposed; viz. Pages 8. 11. in the room of 7. 12. and Pages 7. 12. in the room of 8. 11.

Inner

Inner Form of a Sheet of 18mo. with One Signature.

81	61	-	21	92	82	5 V 6
91	21	-	9	18	08	4 V 7
13 A 7	24	-	3 A 2	34	35	2

Sixteen Pages to an Half Sheet of Eighteens.

21	8 X 5	-		-	9	11
4	18	-	8	5 X 6	14	2 X 8
1 X	16	-	7 X 4	-	10	15

Note. The White-Paper of this Half Sheet being worked off, the middlemost Pages must be transposed, viz Pages 7. 10. in the room of 8. 9. and Pages 8. 9. in the room of 7. 10.

A Sheet

A Sheet of TWENTY-FOURS, with Two Signatures,
Outer Form.

21	13	16	9 ^a ₅	-	36	37	40	33 ^b ₅
8	17	20	5 ^a ₃	-	32	41	44	29 ^b ₃
1 ^a	24	21	4	-	25 ^b	48	54	28

A Half Sheet of Twenty-fours, with Two Signatures.

18	23	22	19 ^z ₂	-	20	21 ^z ₃	24	17 ^z
8	9 ^x ₅	12	5 ^x ₃	-	6	11	10	7 ^x ₄
1 ^x	16	13	4	-	3 ^x ₂	41	51	2

Inner Form of a Sheet of Twenty-fours, with Two Signatures.

34	39	38	35 b6	-	10	15	14	11 a6
30	43	42	31 b4	-	6	19	18	7 a4
27 b2	46	47	26	-	3 a2	22	23	2

A Half Sheet of Twenty-fours, the Sixteen-way.

6 A5	12	11 A6	10
16	13	14	15
3 A2	9	5 A3	4
22	19	20	21
23	18	17	24
2	7 A4	8	1 A

A Sheet of THIRTY-TWOS, with Four Signatures.

The Outer Form.

50	69	29	51 D 2	-	36	45	48	33 C
55 D 4	58	59	54	-	37 C 3	44	41	40
1	1	1	1	-	1	1	1	1
8	9	12	5 A 3	-	22	27	26	23 B 4
1 A	16	13	4	-	19 B 2	30	31	18

A Half Sheet of Thirty-twos, with Two Signatures.

81	31	30	19 B 2	-	20	29	32	17 B
23 B 4	26	27	22	-	21 B 3	28	25	24
1	1	1	1	-	1	1	1	1
8	9	12	5 A 3	-	6	11	10	7 A 4
1 A	16	13	4	-	3 A 2	14	15	2

The

The Inner Form of a Sheet of Thirty-twos, with Four Signatures.

49 D	64	61	52	35 C2	46	47	34
56	57	60	53 D3	38	43	42	39 C4
7 A4	10	11	6	21 B3	28	25	24
2	15	14	3 A2	20	26	32	17 B

A Half Sheet of THIRTY-SIX, with Two Signatures.

11 A6	29 B3	30	9 A5	1	V
14	32	13	16	51	1
5 A3	27 B2	82	3	4	8
20	34	33	22	12	26
17	35	36	23	42	25 B
8	26	25 B	2	7 A4	7 A4

A Half Sheet of SIXTY-FOURS, with Four Signatures.

2	15	14	3 ^{v2}	52	61	64	49 ^d
7	10	11	9	53 ^{d3}	60	57	56
24	25	28	3 ^B 21	38	43	42	39
17 ^B	32	29	20	35 ^{c2}	46	47	34

18	31	30	19 ^{B2}	36	45	48	33 ^c
23	26	27	22	37	44	41	40
8	9	12	5 ^{v3}	54	59	58	55
1 ^v	16	13	4	51 ^{d2}	62	63	50

A Half

A Half Sheet of FORTY-EIGHTS, with Three Signatures.

34	47	46	53 C ₂	36	45	48	33
39	42	43	38	37 C ₃	44	41	40
.....							
18	31	30	19 B ₂	20	29	32	17 B
23	26	27	22	21 B ₃	28	25	24
.....							
8	9	12	5 A ₃	6	11	10	7
1	16	13	4	3 A ₂	14	15	2

A Half

A Half Sheet of NINETY-SIX, with Six Signatures.

99	67	87	79 ²³	71 ^{E4}	59	55 ^{D4}	8	1
66	74	75	70	69	58	5	6	16
87	75	69	54	59	59	21	21	13
79 ²³	70	59	54	54	54	5	5	4
...
78	85 ^{F3}	92	89	88	40	37 ^{C3}	22	19 ^{B2}
86	92	89	88	88	41	44	72	30
96	89	88	88	88	41	44	92	31
18 ^F	88	88	88	88	40	40	32 ^B	18
...
28	87 ^{F4}	90	91	86	38	39 ^{C4}	72	17 ^B
95	90	91	86	86	42	42	52	32
96	91	86	86	86	43	43	82	29
83 ²⁴	86	86	86	86	38	38	12 ^B	20
...
89	69 ^{E3}	76	73	72	56	53 ^{D3}	9	3 ^{A2}
77	76	73	72	72	56	56	11	14
98	73	69	64	64	57	57	01	15
59 ^E	72	64	64	64	56	56	7 ^V	2

A Half Sheet of SEVENTY-TWOS with Three Signatures.

2	32	22	2 V 3	91	5 V 6	01	51	4.	12	42	V 1
7 A 4	18	19	6	13	12	11 A 6	14	5 A 3	20	17	8
32	14	44	29 B 3	38	9 B 38	93	43	30	34	24	4 B 13
25 B	48	45	28	39	34	33 B 5	40	27 B 2	46	47	26
95	59	89	3 C 35	29	9 C 65	09	19	45	49	99	4 C 55
49 C	72	69	52	63	58	57 C 5	64	51 C 2	70	71	50

*A Half Sheet of HUNDRED TWENTY-EIGHTS, with
Eight Signatures.*

1 A	8	55 D4	05	71 E4	99	119 H4	411
16	6	58	39	74	67	122	421
13	21	59	29	75	87	123	921
4	9 V	54	19 D	70	69 E3	118	211
19 B2	22	37 C3	98	85 F3	78	101 G3	001
30	72	44	57	92	36	108	601
31	92	41	87	89	96	105	211
18	32 B	40	33 C	88	18 F	104	76
17 B	72	39 C4	43	87 F4	28	103 G4	86
32	52	42	77	90	56	106	111
29	82	43	97	91	76	107	011
20	12 B	38	33 C	86	38 E4	102	22
3 A2	9	53 D3	25	69 E3	89	117 H3	911
14	11	60	19	76	77	124	521
15	01	57	79	73	08	121	821
2	7 V	56	67 D	72	59 E	120	311

The foregoing Schemes consist, 1. Of Drafts for imposing all the Sizes that regularly descend from *In-Folio*, viz. Quartos, Octavos, Sixteens, Thirty-twos, Sixty-fours, and Hundred twenty-eights. 2. Drafts of Compound Sizes; such as Twelves, Twenty-fours, Forty-eights, and Ninety-fixes. 3. Drafts of some Irregular Sizes; viz. Eighteens, Thirty-fixes, and Seventy-twos. More Irregular Sizes we have not thought fit to introduce; else we might have drawn out Schemes for Imposing Sixes, Tens, Fourteens, Twenties, Twenty-eights, Thirties, Forties, Forty-twos, Fifties, Fifty-fixes, Sixties, Eighties, Hundreds, and Hundred and Twelves; these, and several more, being Sizes that have been found out not so much for use as out of fancy, to shew the possibility of folding a sheet of paper into so many various forms.

In putting down our pages, we place them in the same order as they present themselves upon the Press, for turning the Paper either Octavo or Twelves way. And though Compositors do not lay the pages of some Sizes down in the same manner, they nevertheless make them have their right succession, without embarrassing the Press-man.

The Pages for a Form being put down, we follow them, and see whether the Direction answers to the first word of the next following page. But we do not trust to this in Work that abounds with Titles and Heads, where pages often have the same word for their beginning. In this case we justify the number of such pages

F f
into

into the Direction-lines, rather than run the hazard of transposing them; since it is more easy to put an n-quadrat into the room of a figure, than to rectify a mistake of that kind, after the pages are untied. But in close and ordinary matter we take notice, first, Whether the uneven outer pages have their right Signatures; and then, Whether the number of an out-side page, and the number of the page next to it, amount to one more than there are pages contained in a sheet, or half-sheet of our work. Thus, for example, In Folio, one and four make five: In Quarto, one and eight make nine: In Octavo, one and sixteen make seventeen. And in this manner we may examine every two pages in all other sizes, whether their joint number exceeds the number of pages in a sheet by one; which if it does, is a proof that the pages are in their right places.

§ II. Being sure that our pages are laid down right, we proceed to Dressing of Chases; which we will suppose to be for a sheet of Octavo. Accordingly we endeavour to come at a good pair of Chases that are fellows, as well in circumference as in other respects: and having laid them over the pages for the two different Forms, we consider the largeness of the paper on which the work is to be done, and put such Gutter-sticks betwixt page and page, and such Reglets along the sides of the two Crosses, as will grace the Book with proper Margins, after it is bound. And having dressed the in-side of our pages, we observe to do their out-sides, by putting Side-sticks and Foot-sticks to them. Our pages being now secured by the Furniture about them, we begin

to untie them, Quarter after Quarter, the inner page first, and then the outer; driving at the same time the Letter towards the Crosses, and using every other means to prevent it from hanging, or leaning; for which purpose, and to keep it from other accidents, we secure the pages of each Quarter by a couple of Quoins. This being done, we examine the Furniture of our Form, whether the Gutter-sticks and Side sticks are of a proper length, or whether they bind, that they may be all brought to their right length, which consists in being about a thick Scabbard shorter than the pages. And here, again, we might observe the inconvenience, and loss of Furniture, which arises from Letter of the same Body being cast to different Sizes, in that the Furniture cut to the length of pages of one Fount of Letter, will not serve for work of another Fount, though of the same Body, and the pages of the same number of lines.

§ III. The pages of a Sheet, or a Half-sheet, being now dressed, our next business is to *make the Margin*; or, to try whether our Furniture is so proportioned as that each page may occupy one side of a leaf, so as to have an equal margin of white paper left at the sides as well as at the Head and Foot thereof.

The method of making Margin by Rules, is practised by no other Printing nation, besides the English; and it would be in vain to persuade Printers and Booksellers in Foreign Parts to come into our measures, as to making Margin; since they would disoblige the Literati, were they to deprive them of a large Margin, to

write their Notes and Annotations to books of learning; and as to narrow Gutter-sticks in School-books and other circulating works, they are commonly contrived for the joint interest of the Printer and the Proprietor of such books.

To make proper Margin, some use the following method, for Octavos; viz. They measure and mark the width of four pages by Compasses, on a sheet of paper designed for the work, beginning to measure at the one extremity of the breadth of the sheet. The rest of the paper they divide into four equal parts, allowing two-fourths for the width of two separate Gutter-sticks: the two other two-fourths they divide again into four equal parts, and allow one-fourth for the Margin along each side of the Short Cross; and one-fourth for the Margin to each out-side page. But because the thickness of the Short Cross adds considerably to the Margin, they reduce the Furniture in the Back accordingly, and thereby enlarge the out-side Margin, which requires the greatest share, to allow for the unevenness of the paper itself, as well as for Pressmen laying sheets uneven, when it is not the paper's fault. And having thus made the Margin between page and page to the breadth of the paper, they proportion the Margin in the Head in the same manner to the length of the paper, and accordingly measure and mark the length of two pages; dividing the rest into four parts; whercof they allow one-fourth for each side of the Long Cross, and one-fourth for the Margin that runs along the foot of the two ranges of Pages. But
 though

though they count each part equal to another, they do not prove so upon examination; for as they did at the Short Cross, so they lessen the Furniture on both sides the Long Cross, to enlarge the Bottom Margin, for the same reasons that were assigned for enlarging the Side Margin.

This being the method that is used by some, in making Margin to Octavos, they go the same way to work in Twelves; where their chief care is to fix upon a proper size for the Head-sticks, or Bolts; and according to them allow in the following manner; viz. For the outer Margin along the Foot of the pages, the amount of two-thirds of the breadth of the Head-sticks; and the same for the within Margin, that reaches from the foot of the fifth page to the centre of the Groove for the Points: and from the center of that Groove to the pages of the Quire, or that cut off, they allow half the breadth of the Head-stick. As to the Margin along the Long Cross, it is governed by the Gutter-sticks; and it is common to put so much on each side of the Long Cross as amounts to half the breadth of the Gutter-stick, without deducting almost any thing for the Long Cross; since that makes allowance to answer the outer Margin—exposed to the mercy both of the Pressman and Bookbinder.

Thus much may suffice to speak about making Margin the above way; which, tho' it is different from what others use, is nevertheless the Basis for making proper Margin. Accordingly some Compositors chuse to make Margin in the following manner, viz. Having dressed their Chases with suitable Furniture

ture for Octavo, they fold a sheet of the right paper to that size: then, opening it to the size of a leaf in Quarto, they hold, or lay one extremity thereof against the hind side of the Fifteenth page, if it is an Inner Form; or against the hind side of the Thirteenth page, if it is an Outer Form, to observe, whether the opposite extremity of the paper (folded in Quarto) reaches to, and fairly covers, the Third, or the First page, according to the Form under hand; which, if it does, proves the Margin of that Quarter to be right; and that the others may be adjusted to *that*. And having in this manner made the Margin to the Breadth of the Paper, they proportion it also to the Length thereof, by trying, whether the depth of the paper (folded in Quarto) reaches to, and fairly covers, the Direction line of the Fifteenth, or of the Thirteenth page, when the upper end of the paper (folded in Quarto) is held or laid against the Back of the Running title of the Tenth or of the Twelfth page; which, if it does, proves that the Margin to the *Length* of the paper is right. But in making Margin we should always have regard that the Gutter-sticks may have their proper Breadth; which may be tried by holding one end of the paper (folded in Quarto) to the centre of the Groove in the Short Cross, to observe whether the Fold for Octavo falls in the middle of a Gutter-stick: which, if it does, proves that the Gutter-stick is of a proper size. In this manner we may also try the Margin of Twelves, and other sizes: for having folded with exactness a sheet of the right paper to the work, one Quarter of a Chase may be first dressed, and the

Margin

Margin to it made, before we go further; for if the Foldings fall in the middle of the respective parts of the Furniture, it proves that the Margin is right throughout.

As lessening and widening of Gutter-sticks is sometimes unavoidable, and withal troublesome to Compositors, we propose here an expedient that will facilitate the bringing Gutter-sticks to any proportion that shall be required: In order to this we would recommend to cut two Reglets, either of Broad or Narrow Quotations, to the length of our pages, that so we may put betwixt them as much as is wanting to bring our Gutter-sticks to a proper breadth; or else reduce them, by changing broader Reglets for narrower ones. The making of Gutter-sticks in this manner would be found not only convenient to Compositors, but also commodious to Pressmen, in work that has its Margin altered upon the Press.

The Chases being now dressed, and the proper Margin made, nothing remains but Quoining and Locking up the Forms. But before we begin doing this, we cut Slips of Scabbard, of which we put one, or sometimes more, along both sides of the Long as well as of the Short Cross; not upon account of enlarging the Margin, but to supply the inequality of one Cross to another, and to be of help to Pressmen in making Register: for though we find some of that superlative nicety as to fancy *here* a thin Scabbard too much, and *there* one too little, it amounts to no more than mere imagination, and, perhaps, a shew of authority; considering that the very parts of the paper

whose

whose Margin is adjusted by Scabbards, are subject to the Bookbinder's Plough; and that it is dubious whether he will have the same regard to Margin with the Printer; since we are induced to think, that the abolishing of large out-side Margin is owing to some penurious Bookbinders who gave themselves more concern about White-paper Shavings than the handsome appearance of a Book: hence, to prevent murdering Books in this manner, it is usual in Germany to make the Title page considerably wider and longer than those of the work; which sometimes has a good effect.

All that has been said concerning making of Margin, relates properly to Imposing the First sheet of a Work; for after *that is true* dressed, a Second, or more sheets, may be dressed with less trouble; and then we impose from wrought-off Forms; where we have nothing else to do but to put the Chase and Furniture about the pages in the same manner as we take it off the Form we are stripping; after which we put the Running titles over the pages, and untie them, to make room for the Quoins, which we put to each Quarter in the same order as we take them off the Form we impose from. And now we come to a fresh instance of our carefulness in Imposing; which shews itself in altering the Folios of the respective pages according to their regular succession. In order therefore to know the First Folio of a sheet in Folio, Quarto, Octavo, Twelves, and Eighteens, we have arranged the following Tables, viz.

TABLE

T A B L E, *shewing the First Folio of a Sheet of*

F O L I O,

Throughout Thirteen Alphabets.

<i>Alphabet</i>	1.	2.	3.	4.	5.	6.	7.
A	0	89	181	273	365	457	549
B	1	93	185	277	369	461	553
C	5	97	189	281	373	465	557
D	9	101	193	285	377	469	561
E	13	105	197	289	381	473	565
F	17	109	201	293	385	477	569
G	21	113	205	297	389	481	573
H	25	117	209	301	393	485	577
I	29	121	213	305	397	489	581
K	33	125	217	309	401	493	585
L	37	129	221	313	405	497	589
M	41	133	225	317	409	501	593
N	45	137	229	321	413	505	597
O	49	141	233	325	417	509	601
P	53	145	237	329	421	513	605
Q	57	149	241	333	425	517	609
R	61	153	245	337	429	521	613
S	65	157	249	341	433	525	617
T	69	161	253	345	437	529	621
U	73	165	257	349	441	533	625
X	77	169	261	353	445	537	629
Y	81	173	265	357	449	541	633
Z	85	177	269	361	453	545	637

T A B L E, *shewing the First Folio of a Sheet of*

F O L I O.

<i>Alphabet</i>	8.	9.	10.	11.	12.	13.
A	641	733	825	917	1009	1101
B	645	737	829	921	1013	1105
C	649	741	833	925	1017	1109
D	653	745	837	929	1021	1113
E	657	749	841	933	1025	1117
F	661	753	845	937	1029	1121
G	665	757	849	941	1033	1125
H	669	761	853	945	1037	1129
I	673	765	857	949	1041	1133
K	677	769	861	953	1045	1137
L	681	773	865	957	1049	1141
M	685	777	869	961	1053	1145
N	689	781	873	965	1057	1149
O	693	785	877	969	1061	1153
P	697	789	881	973	1065	1157
Q	701	793	885	977	1069	1161
R	705	797	889	981	1073	1165
S	709	801	893	985	1077	1169
T	713	805	897	989	1081	1173
U	717	809	901	993	1085	1177
X	721	813	905	997	1089	1181
Y	725	817	909	1001	1093	1185
Z	729	821	913	1005	1097	1189

TABLE, *shewing the First Folio of a Sheet of*
 Q U A R T O.

<i>Alphabet</i>	1.	2.	3.	4.	5.	6.
A	0	177	361	545	729	913
B	1	185	369	553	737	921
C	9	193	377	561	745	929
D	17	201	385	569	753	937
E	25	209	393	577	761	945
F	33	217	401	585	769	953
G	41	225	409	593	777	961
H	49	233	417	601	785	969
I	57	241	425	609	793	977
K	65	249	433	617	801	985
L	73	257	441	625	809	993
M	81	265	449	633	817	1001
N	89	273	457	641	825	1009
O	97	281	465	649	833	1017
P	105	289	473	657	841	1025
Q	113	297	481	665	849	1033
R	121	305	489	673	857	1041
S	129	313	497	681	865	1049
T	137	321	505	689	873	1057
U	145	329	513	697	881	1065
X	153	337	521	705	889	1073
Y	161	345	529	713	897	1081
Z	169	353	537	721	905	1089

T A B L E, *shewing the First Folio of a Sheet of*

O C T A , V O.

A	o
B	i
C	17
D	33
E	49
F	65
G	81
H	97
I	113
K	129
L	145
M	161
N	177
O	193
P	209
Q	225
R	241
S	257
T	273
U	289
X	305
Y	321
Z	337

A a	353
B b	369
C c	385
D d	401
E e	417
F f	433
G g	449
H h	465
I i	481
K k	497
L l	513
M m	529
N n	545
O o	561
P p	577
Q q	593
R r	609
S s	625
T t	641
U u	657
X x	673
Y y	689
Z z	705

T A B L E, *shewing the First Folio of a Sheet of*

I.	II.
T W E L V E S.	E I G H T E E N S.

A	0
B	1
C	25
D	49
E	73
F	97
G	121
H	145
I	169
K	193
L	217
M	241
N	265
O	289
P	313
Q	337
R	361
S	385
T	409
U	433
X	457
Y	481
Z	505

A	0
B	1
C	37
D	73
E	109
F	145
G	181
H	217
I	253
K	289
L	325
M	361
N	397
O	433
P	469
Q	505
R	541
S	577
T	613
U	649
X	685
Y	721
Z	757

The Running titles, with the right folios to them, being put to the pages, we proceed to locking-up our Forms; which is done by driving *fit* Quoins betwixt the Side and Foot-stick of each Quarter and the Chafe, till the whole Form may be raised. And though locking-up a Form may be thought a trifling function, it demands our attention nevertheless in several instances; for in the first place, and after we have pushed the Quoins as far as we can, with our fingers, we make use of the Mallet and Shooting-stick, and gently drive the Quoins along the Side-sticks at first, and then those along the Foot-sticks; taking care to use an equal force in our strokes, and to drive the Quoins far enough up the shoulders of the Side and Foot-sticks, that the Letter may neither belly out one way, nor hang in the other: and as to the lower Quoins, they ought likewise to be drove to a station where they may do the office of keeping the Letter straight and even. And here we venture to disapprove the custom of flanting Quoins on both sides, and planing their edges and corners off; whereby all the bevil'd-off parts are rendered ineffectual to do the office of a Quoin, or Wedge: for the flanted side of a Quoin running against the square side of the Chafe, must needs carry a cavity with it, and consequently be void of binding with equal force in every part; whereas (in our opinion) it would deserve the name of an Improvement, were Quoins flanted on one side only; and their Gradation and Variety of sizes preferred to superficial neatness, which answers no other end than that of making the bevil'd-off parts

of

of a Quoin uselefs, and incapable to do the same execution with a plain one, that binds and bears alike in all its parts. And as to the edges that are planed off acrofs the two ends of a Quoin, the want of them causes the Shooting-stick to fly off the Quoin almost at every hard stroke of the Mallet, because the Quoin-end of the Shooting-stick is rounded off; for which reason we should chuse to have that end made of a forked, or else of a square form, to be of the more service in unlocking a Form.

Our Form, or Forms, being now locked up, and become portable, we deliver them to the Pressmen to pull a Proof of them. But here we cannot proceed before we have taken notice of a Corruption that prevails with some Pressmen, in turning the Term of *First* Proof into that of *Foul* Proof, and often acquit themselves in the function of pulling Proofs accordingly; whereas even a slight knowledge of Printing is sufficient to judge, that a Proof-sheet ought to be pulled as clean and as neat as any sheet in a Heap that is worked off. Hence it is a rule with *curious* Pressmen, not to give Proofs a high colour, nor to use very wet paper for them, but instead of these easements to give them a long and slow pull, that the Matter may come off clean and fair, so that every letter may appear full and plain: after which the Forms are rubbed over with a wet ley-brush; then carefully taken off the Press, and the Proof and Forms delivered to the Compositor's further care.



C H A P. XI.

Of Correctors and Correcting.

IT has ever been the pursuit of Eminent Printers to merit that character, by their particular care that the effects of their profession should appear without faults and errors, not only with respect to false letters, and wrong spelling, but chiefly in regard to their correcting and illustrating such words and passages as are not fully explained or expressed by Authors and Translators: which shews, that the office of a Corrector is not to be conferred upon one that has a tolerable judgment of his mother-tongue only; but who is a person of greater capacity, and has a knowledge of such languages, at least, as make a considerable figure in Printing; such as Latin, French, Italian, and Spanish. And because Greek and Hebrew are interspersed in most Works of learning, a Corrector ought not to be a stranger to either. To have a competent knowledge of what has been recited, besides a quick and discerning eye, are the proper accomplishments by which a Corrector may raise his own and his Master's credit: for it is a maxim with Booksellers, to
give

give the first edition of a work to be done by such Printers whom they know to be either able Correctors themselves, or that employ fit persons, though not of Universal learning, and who know the fundamentals of every Art and Science that may fall under their examination. We say *Examination*: for in cases where a Corrector is not acquainted with the subject before him, he, together with the person that reads to him, can do no more than literally compare and cross-examine the Proof by the Original, without altering either the Spelling or Punctuation; since it is an Author's province to prevent mistakes in such case, either by delivering his Copy very accurate, and fairly written, or by carefully perusing the Proof-sheet. But where a Corrector understands the language and characters of a work, he often finds occasion to alter and to mend things that he can maintain to be either wrong, or else ill digested. If therefore a Corrector suspects Copy to want revising, he is not to postpone it, but to make his emendations in the Manuscript before it is wanted by the Compositor, that he may not be hindered in the pursuit of his business; or prejudiced by alterations in the proof, especially if they are of no real signification; such as far-fetch'd spelling of Words, changing and thrusting in Points, Capitals, or any thing else that has nothing but fancy and (perhaps pettish) humour for its authority and foundation.

What is chiefly required of a Corrector, besides discovering literal faults, is to Spell and to Point after

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the

the prevailing method and genius of each particular language : but these being two points that never will be reconciled, but always afford employment for pedantic Critics, every Corrector ought to fix upon a method to spell ambiguous words and compounds always the same way. And that the Compositors may become acquainted and accustomed to his way of spelling, the best expedient would be to draw out, by degrees, a Catalogue of such ambiguous words and compounds. But it is with regret we see some Correctors rather break the measures for conformity, than lay the foundation thereto, that they may find subterfuges for spelling the same word different ways ; pretending at the same time to have Derivation and Etymology on their side, when it is rather with a view to make a Proof look *soul*, because the Compositor has not made so many *real* faults as Correctors sometimes chuse to see, lest they should be suspected of having been remiss in reading a Proof attentively.

As it is necessary that Correctors should understand languages, so it is requisite that they should be acquainted with the nature of Printing ; else they will be apt to expose themselves in objecting against several things that are done according to method and practice in Printing. It is for this reason that Correctors in most Printing-houses are chosen out of Compositors that are thought capable of that office ; and who know not only how to correct literal faults, but can also discern where improprieties in workmanship occur ; which cannot be expected in Gentlemen who have not a sufficient knowledge of Printing : and it would be
 very

very ungenerous in a Compositor to swerve from the common rules in practice, for his convenience, because the Corrector is not Printer enough to find fault with it.

The manner in which Correctors take notice of faults in a Proof, is by particular symbols and signs, that are marked in the Margin, opposite the line that has the faults in it: for it is a general law in Printing, that whatever fault is not marked or taken notice of in the Margin, the Compositor is not answerable for, if it passes unobserved, and not corrected. To make therefore Gentlemen acquainted with the characters that are used by Correctors, we will describe them in the following manner, viz.

1. If they espy a wrong letter in a word, they draw a short stroke through it, and make another short stroke in the Margin, behind which they mark the letter that is to make the word right; and this they do to all other faults that may happen in the same line; always drawing a *perpendicular* stroke through the wrong letter, and making the right one in the Margin, with a similar stroke *before* it. In this manner they correct also whole words; drawing a stroke across the wrong word, and writing the right one in the Margin, opposite the faulty line, and with a stroke before it.

2. If a Space is wanting between two words, or letters, that are to stand separated, they draw a parallel stroke where the separation is to be, and put this sign # opposite in the Margin. Again, where words or letters should join, but stand separated, they make

H h 2

this

this mark — under the place of separation, and signify the junction of them by the same mark in the Margin.

3. If a letter or letters, word or words, are set double, or otherwise require to be taken out, they draw a dash across the superfluous word, or a parallel stroke down the useless letter, and make this mark of *deletur* ∫ in the Margin: but if a word is to be supplied by another, they strike the wrong word out, and insert the right or better word in the Margin.

4. If a letter is turned, they make a dash under it, and put this mark 9 in the Margin.

The Article of marking *turned* letters, tries a Corrector's skill in knowing the *true* formation of them, without which it would be better to mark turned letters in the same manner as they do *wrong* letters, unless they are very sure that they can distinguish b d n o p q s u x z, when they are turned, from when the same letters stand with their Nick the right way.

5. If a Space sticks up and appears betwixt words, or in other places, they signify it by marking a perpendicular stroke | in the Margin.

6. If words or letters are to be transposed, they encircle the uncouth words thus, one give me, instead of, Give me one; and put a mark like a large Greek Circumflex in the Margin: but if several words are to be transposed, they mark their right order by figures over them, and put the same number of figures (in a series) in the Margin, in this manner, viz. | 1 2 3 4 5 6

7. Where matter is run on that should begin a new Paragraph, they draw a stroke down the place, and this mark [in the Margin: but where a Paragraph should

should have been continued, they draw a short line after the broken-off matter, and write in the Margin, *No Break*.

8. If letters or words of one sort of characters are to be changed into another, they make a stroke underneath the word or letter, and intimate on the Margin in what Letter it is to be, by marking *Rom.* or *Ital.* accordingly.

9. Where so much of the Copy is left out as it will be troublesome to write in the Margin, they draw a parallel stroke where the omission begins, and write opposite in the Margin, *Out*; or else, *See Copy*.

10. Where words are struck out that are afterwards again approved of, they mark dots under such words, and write in the Margin, *Stet*.

After these items for Correcting the faults in a Proof, we add the following summary observation, viz. That whatever is wrong and faulty in a Proof, is to be taken notice of either by drawing a parallel stroke *through* single letters; or by making a rectilinear dash *across* a wrong word or words; or else by marking an even stroke *underneath* a word or words that are to be changed into other characters; and that, Whatever may be taken notice of as faulty in the matter, to be mended either by Changing, Adding, or Taking-away, must be marked *in the Margin*, and opposite the line, observing at the same time to distinguish one Correction from another by a stroke between each. And this, we judge, will be sufficient to assist Gentlemen
in

in properly correcting their works; without pointing out to them how to mark letters that stand out of line, or are of a wrong Fount; these coming more properly under the cognizance of a Corrector who is a Printer.

Previous to reading the Proof the Corrector examines the pages of the Sheet, or Form, to see that they are imposed right; likewise whether the Signatures are put to the proper pages; and whether the folio of the first page be right, and the rest follow in a numerical order.

Of Correcting in the Metal.

BY Correcting we understand here the rectifying of such Faults, Omissions, and Repetitions as are made by the Compositor, either through inadvertency, or else through carelessness. And though the term of Corrections is equally given to the Alterations that are made by Authors, it would be more proper to distinguish them by the name of *Emendations*; notwithstanding it often happens, that after repeatedly mending the matter, the first conceptions are at last recalled: for the truth whereof none can be better vouchers than Compositors, who often suffer by fickle Authors that know no end of making Alterations, and at last doubt whether they are right or wrong; whereby the work is retarded, and the workman greatly prejudiced in his endeavours; especially where he is not sufficiently satisfied for spending his time in humouring whimsical Authors.

Correcting is the most disagreeable work that belongs to Compositors; who therefore endeavour to do their work not only expeditiously, but also clean and correct. Accordingly some are very accurate in Distributing, that they may trust to their taking up right letters in Composing, when their attention perhaps is absent; whereas others can neither make dispatch, nor depend upon accuracy, unless they confine themselves to silence, and are not disturbed by idle, insignificant, and even indecent talking: and this being disagreeable to most Compositors, may be the reason that Pressmen are in general separated from them.

In correcting the First Proof, we seldom have any other faults to mend than those of our own committing, unless the Corrector heightens them by his peculiarities. But notwithstanding all the care that can be taken, the best of workmen cannot boast of being exempted from setting Doubles, and leaving Outs—two accidents that are attended with extraordinary trouble, and are seldom rectified without overrunning. In such cases a judicious Compositor considers first well in what manner an Out may be got in, or a Double be drove out, without making a glaring Botch; and accordingly examines his matter, whether overrunning forward, or backward, will best answer his purpose. But a great deal of trouble might be saved in cases of Outs and Doubles, would Correctors try to add as much as will fill up the Double; or to shorten the matter, to make room for an Out; unless both the one and the other are too considerable for
that

that expedient; which otherwise might be safely ventured, without injuring a Writer's meaning. This would be a sure means to secure a neat Compositor's workmanship and care in true spacing his matter; whereas that beauty is lost by Alterations and Over-running.

What is required of a Compositor when he begins to correct a foul Proof, is a *sharp* Bodkin, and Patience, because without them the Letter cannot escape suffering by the steel; and hurrying will not permit him to justify the lines true. No wonder therefore to see Pigeon-holes in one place, and Pi in another.

The First Proof being corrected, a Perfect sheet is pulled clean, to be sent to the Author, or to the person by him authorized; either of whom, if they understand the nature of Printing, will not defer reading the sheet, but return it without any alterations perhaps, to be made ready for the Press. But because such good Authors are very scarce, Compositors are dispirited every time they send a Proof-sheet away, as not knowing when and how it may be returned, and how many times more it will be wanted to be seen again, before the Author is tired, or rather ashamed, of altering more.



C H A P. XII.

Observations upon GREEK and HEBREW.

I.

Observations upon GREEK.

THE Greek is one of the Sacred languages, and more frequently used in Printing than any of the rest; which makes it necessary almost for every Printing-house to be furnished with Greek characters, though not to the same amount of weight: for a quantity of Greek letter that will moderately fill a Case, and that consists of no other than *useful* Sorts, is sufficient to serve the common turn for Notes, Mottos, Words, &c. and such a collection of useful Sorts might be lodged in a Common pair of Cases, were some large Boxes reduced into smaller ones. But this is impracticable where Ligatures and Abbreviations abound, and where Seven hundred and fifty Boxes are required for the different Sorts in a Fount of Greek. What induced the first Founders of the Art to perplex themselves with cutting and casting so many different Abbreviations and Contractions, may be partly guessed, by supposing that they were intended

to imitate Greek Writing; and to grace them with the same flourishes of the pen: but what could prompt them to confound themselves with an infinite number of Ligatures, we cannot well account for; and only suggest, that it was the contrivance of Letter-cutters, to promote their own business. But this unprofitable improvement has almost entirely lost its credit; and Greek, at present, is cast almost every-where without Ligatures and Abbreviations, unless where Founders will not forbear thrusting them in; or where they have express orders to cast them, for Classical and other Works of consequence: in which case *some* Ligatures not only grace Greek Letter, but are also *Fat* to a Compositor who knows to use them properly. But because we have intimated, that the *useful* Sorts of a Fount of Greek Letter may be lodged in a pair of Common Cases that contain no more than 154 Boxes, we will make good our assertion by a Scheme for that purpose; which will incontestably prove, that a great many of the Sorts must be needless, where their number occupies 750 Boxes. It must however be observed, that almost Three hundred of these Sorts are the same, and have no other difference than that of being kerned on their hind side; for we remember to have seen Greek with Capitals kerned on both sides. But before we say any more about Ligatures, we will consider the single letters of the Greek, and accordingly exhibit

The GREEK Alphabet.

ἄλφα	Alpha	A	α	a
βῆτα	Bêta	B	{ β ε }	b
γάμμα	Gamma	Γ	{ γ γ }	g
δέλτα	Delta	Δ	δ	d
ἐψιλὸν	Epsilon	E	ε	e <i>short</i>
ζῆτα	Zêta	Z	{ ζ ς }	z
ἥτα	Eta	H	η	e <i>long</i>
θῆτα	Thêta	Θ	{ θ θ }	th
ῥῖτα	Jôta	I	ι	i
κάππα	Kappa	K	κ	k
λάμβδα	Lambda	Λ	λ	l
μῦ	Mu	M	μ	m
νῦ	Nu	N	ν	n
ξῖ	Xi	Ξ	ξ	x
ὀ μικρόν	Omicron	O	ο	o <i>short</i>
πῖ	Pi	Π	{ π π }	p
ῥῶ	Rho	P	{ ρ ρ }	r
σῖγμα	Sigma	Σ	{ σ ς }	s
ταῦ	Tau	T	{ τ τ }	t
υψιλὸν	Ypsilon	Υ	υ	y
φῖ	Phi	Φ	φ	ph
χῖ	Chi	X	χ	ch
ψῖ	Psi	Ψ	ψ	pf
ὦ μέγα	Omega	Ω	ω	o <i>long</i>

The GREEK LOWER CASE.

α	ε	η	ο	υ	ω	υ"	ξ	η	θ	ρ	φ
β	ϛ	γ	δ	ε	ζ	ς	σ	τ	θ	ρ	χ
κ	λ	μ	ν	ξ	ο	π	ω	π	ρ	ρ	
ξ	ψ	γ	τ	Spaces.	ω	ω	ω	ω	ω	ω	

The Greek Alphabet contains Seventeen Consonants, and Seven Vowels.

Two Vowels make a Diphthong; of which there are Six, that are called *proper* Diphthongs.

αι αυ ει ευ οι ου.

Instead of αι ηι and ωι, the Greeks write α η and ω; the Point under these Vowels denoting the *Jota*, which therefore is called *Jota subscriptum*. But because Capitals have no Subscripts, the Jota is put in Lower-case to the Capital letter; as, ΤΩι ΠΟΙΗΤΗι.

The Greek Vowels admit of two Aspirations, viz. *Spiritus Asper* ['], and *Spiritus Lenis* [' '].

Spiritus asper has the sound of an *h*; but before a word in large Capitals it is supplied by the letter H, as in HEKATON.

All the words that begin with a Vowel, have one of these Aspirations over them; but the Vowel Ypsilon admits of no other than the *Spiritus asper*, at the beginning of a word.

In Diphthongs the Spiritus is put over the *second* Vowel, as αὐτός, not αὐτός.

Of all the Consonants, the letter ρ, at the beginning of a word, has an *Asper* over it, as ῥέω; and where two ρ's meet in a word, the first has a *Lenis*, and the other an *Asper* over them.

The Greek has Three Accents, viz. *Acute*, ['] to be put to syllables that are pronounced *sharp*.

Grave,

Grave, [`] to stand with syllables that are pronounced *heavy*.

Circumflex, [~] to be placed over syllables that are pronounced *long*.

The *Apostrophe* ['] is used for cutting off the Vowels *α ε ι ο*, and the Diphthongs *αι* and *οι*, when they stand at the end of a word, and the next word begins with a Vowel; as, παρ', αὐτῶ, for παρὰ αὐτῶ; πάνι' ἔλεγον for πάντα ἔλεγον.

Sometimes the *Apostrophe* contracts two words into one; as, κἀγὼ for καὶ ἐγὼ, ἐγῶμαι for ἐγὼ οἶμαι, κἀκεῖν for καὶ ἐκεῖν.

Sometimes an *Apostrophe* supplies the first Vowel beginning a word; as, ᾧ γὰρ for ᾧ ἀγαθῷ, πῶ' εἰ for πῶ' ἐστὶ: but this chiefly happens in Poetry.

But the Prepositions *περὶ* and *πρὸ* suffer no *Apostrophe*, though the next word begins with a Vowel; for we write, περὶ ὑμῶν, πρὸ ἐμῶ; περὶ αὐτον, πρὸ ἐτῶν, &c.

The *Diæresis* [..] separates two Vowels, that they may not be taken for a Diphthong; thus, αὐτῇ with a *Diæresis* makes three syllables; but without a *Diæresis* *αυ* is a Diphthong, and makes αὐτῇ have but two syllables.

Diaſtole [,] is put betwixt two Particles that would bear a different sense without it; thus, ὅ,τε ὅ,τι signifies *whatever*; whereas ὅτε stands for *as*, and ὅτι for *that*. τό,τε with a *Diaſtole* implies *and this*; but when contracted, it answers to the Adverb *then*.

The sign of *Interrogation*, in the Greek, is made by a Semicolon [;], and is of the same signification with this mark, viz. ?

The *Colon*, in the Greek, is made by an inverted Full-point [·], and is of the same signification with this sign, viz. :

Every parcel of Greek Letter was formerly charged with more or less different sorts of Ligatures, Abbreviations, and Contractions. That custom, however, being now almost generally discontinued, we have thought it immaterial to exhibit their figures, considering that they are of no other service than to heighten charges; to be ballast in Cases; and to frighten a young Compositor, at the sight of the great number of Boxes which they undeservedly occupy: for of what advantage can it be to a Compositor to put himself out of his position, to come perhaps to *αι αυ ει, γα δε δι κο λυ μω*, and hundreds of the like Sorts, in a piece, when he may take up two single letters sooner, out of Cases of common dimensions? We shall therefore conclude what we mean to say respecting Ligatures and Abbreviations, with giving it as our opinion, that had Founders proper notice given them of what to introduce, or to leave out in a Fount, they now would rather put by, or destroy the Punches and Matrices of obsolete and useless Sorts, than thrust them upon the Printer: for we judge that it is less profitable to cast 500 pounds weight of Seven hundred, than of Two hundred Sorts; which, however, was not regarded by former Founders, who seemingly studied their own interest too abstractedly from that of a Printer's.

The HEBREW Alphabet.

Aleph	א	י
Beth	ב	b
Gimel	ג	g
Daled	ד	d
He	ה	h
Vau	ו	v Conson ^t
Zajin	ז	ds
Cheth	ח	ch
Teth	ט	t
Jod	י	j Conson ^t
Caph	כ	k
Lamed	ל	l
Mem	מ	m
Nun	נ	n
Samech	ס	f
Ajin	ע	gn
Pe	פ	p
Tzadde	צ	tz
Coph	ק	k
Refch	ך	fch
Schin	ש	fch
Thau	ת	t

Letters that have a likeness to others.

Beth	Caph		
ב	כ		
Gimel	Nun		
ג	נ		
Daleth	Caph	Resch	
ד	ך	ר	
He	Cheth	Thau	
ה	ח	ת	
Vau	Zaijn	Jod	Nun
ו	ז	י	ן
Teth	Mem		
ט	מ		
Mem	Samech		
ם	ס		
Aijn	Tzadde		
ע	צ		

FINAL LETTERS.

Caph	Mem	Nun	Pe	Tzadde
ך	ם	ן	ף	ץ
		K k		The

The following Five Letters are cast broad, and are used at the end of words, viz.

Aleph He Lamed Mem Thau

א ה ל מ ת

but are not counted among the Final Letters, being contrived for Justifying, because Hebrew is not divided.

The Letters of the Hebrew Alphabet are all Consonants; and the Points underneath them are the Vowels.

The Hebrews have Seventeen Vowels, viz.

I. Five that are pronounced *long*, viz.

◌ Kamez,	a o
◌ Tfere,	e
◌ Chireck magnum	i [under ◌]
◌ Cholem	o [over ◌]
◌ Schurek	u

II. Five that are pronounced *short*, viz.

◌ Patach	a
◌ Sægol	e
◌ Chirek parvum	i
◌ Kamezchatuph	o
◌ Kybbuz	u

III. Seven that are pronounced *very short*, viz.

◌ Patach furtivum	a
◌ Scheva	e
◌ Chateph-Patach	a
◌ Chateph Sægol	e
◌ Chateph-Kamez	o

• Dagesch

• Mappik.

The Dagesch is either *forte*, or *lenis*.

Dagesch forte may have a place in all the letters, except **ה ה ה ע ר**; and it makes the letter sound double.

Dagesch lene has its place in **ב ג ד כ פ ת**, and raises the sound of the letter.

Mappik has its place in the letters *He* and *Fod*.

Raphe, is a short dash that heretofore was put over **ב ג ד כ פ ת** when they had no Dagesch; to shew that they should be pronounced soft, and with the aspiration of an *h*.

Maccaph — is used to connect words together; which is common in Hebrew.

Soph-Pasak, is the name of the two great Points [∴] which stand at the end of each verse in the Hebrew Bible.

Besides the Vowels, the Hebrews have various Accents, of which some have their place over, and some under the letter. They are not used in all Hebrew Writings, but only in some Books of the Bible, where they stand for Notes to sing by, and are therefore called *Accentus tonici*. Others, again, are named *Accentus distinctivi*, because they distinguish the sense, as Pointing does in the English; and still others have the appellation of *Ministri*, or *servi non distinctivi*, which shew the Construction and Connexion of words. The figures, names, and signification of

the Accents that stand *over* the letters, are as follow, viz.

Segol, or Segolta	ˆ	strong Colon
Sakeph katon	:	Comma
Sakeph gadol	⋮	Ditto
Refia, or Rbhja	˙	Ditto
Sarka	˘	Semicomma primum
Paſta	˘	Ditto
Gereſch	˘	Semicomma ſecundum
Geraſchajim	“	Ditto
Teliſcha gedola	⋈	Semicomma tertium
Paſer minor	˘	Semicomma quartum
Paſer major	˘˘	Ditto
Karne para	⋈	Ditto
Schalſcheleth	⋈	Semicolon
Pefik, or Legarme	˙	Ditto
Kadhma	˘	Semi-comma
Teliſcha ketanna	⋈	Ditto

The following Accents have their place *under* the Letters; viz.

Silluk	!	Punctum
Atnach	^	Colon
Tiphcha	˘	Semicomma primum
Tefir	˘	Ditto
Jethif	⋈	Semicolon
Munach	˘	Semicomma
Merca ſimplex	˘	Ditto
Merca duplex	˘	Ditto
Mahpach	˘	Ditto
Darga	˘	Ditto

Meajela ' Ditto

Jerach ben jomo v Ditto

The Hebrew has no Capitals; and therefore letters of the same shape, but of a large Body, are used at the beginning of Chapters, and other parts of Hebrew work.

But we must not pronounce it a fault, if we happen to meet in some Bibles with words that begin with a letter of a much larger Body than the mean Text; nor need we be astonished to see words with letters in them of a much less Body than the mean Text; or wonder to see final letters used in the middle of words; for such Notes shew that they contain some particular and mystical meaning. Thus in 2 Chron. I. 1. the word *Adam* begins with a letter of a larger size than the rest, thereby to intimate, that Adam is the father of all Mankind. Again, in Genes. I. 1. the great Beth in the word *Bereſchith* stands for a Monitor of the great and incomprehensible work of Creation. Contrary to the first, in Prov. XXVIII. 17. the Daleth in the word *Adam* is considerably less than the Letter of the main text, to signify, that whoever oppresses another openly or clandestinely, though of a mean condition; or who sheds innocent blood, is not worthy to be called Man.

Sometimes the open or common Mem stands in the room of a final one; as in Nehem. II. 13. where the word *hem* has an open Mem at the end, in allusion to the torn and open walls of Jerusalem, of which there is mention made; and, in Es. VII. 14. where the
Prophet

Prophet speaks of the Conception of the Virgin Mary, the Mem in the word *haalma*, or Virgin, is a close or final letter, to intimate the virginity of the mother of our Saviour. Such are the peculiarities of some Jewish Rabbi's in Bibles of their publication; of which we have instanced the above, to caution Compositors not to take them for faults, if such mystical writings should come under their hands.

For the rest, Hebrew reads from the right to the left, like all other Oriental languages, except the Ethiopic and Armenian. In composing Hebrew, therefore, the Jews begin at the end of the Composing-stick, and justify the Vowels and Accents over and under the letters after the line of Matter is adjusted. But Points serving often to make the sense of a word ambiguous, they are seldom used in any other than Theological and Grammatical Writings.

The Hebrew, like the Greek, has more Sorts than are required in a complete Fount; which renders it difficult to make room for them in Cases of common dimensions; considering that the Powers of the Hebrew Alphabet are distinguish'd by Points that letters have either in their ventre, or over their body. Accordingly we observe in some Founts the *Dagesch forte* to have a place in *all* the letters of the Alphabet, though it is not admitted into five of them. The second series is, the *whole* Alphabet with a *Cholem* over each letter: and a third Alphabet has the *Dagesch* in the ventre, and the *Cholem* a-top. Exclusive of which treble Alphabet, some Founders cast a fourth that is kerned on
both

both sides, and makes the Alphabet with a *Cholem* needles, because by the help of the kernered Alphabet not only the Cholem, but even the Vowels may be made to stand in their proper places, provided they are cast after the manner of Greek Accents, thin, and inclining towards the middle of the foot of letters. Thus the Four recited Alphabets take up all the Boxes of a common Upper-case. But to make room for the rest in a Lower-case, cannot be done without dividing it into more Boxes than Fifty-six. To find therefore the difference, we will mention the Lower-case Sorts in the following order, viz.

The plain Alphabet requires Boxes	22
Final Letters, plain — —	5
Final Caph with Dagesch, Kametz, &c.	3
Broad letters, at the end of words —	5
Vowels — — —	10
Maccaph, and Soph-Pafuk — —	2
Accents, 16 <i>over</i> , and 12 <i>under</i> letters	28
Quadrats and Spaces for Accents, and Letter	8

According to this Calculation, the Lower-case for Hebrew Sorts should have above Four-score Boxes; which exceed the number of those in a common Case by Seven-and-twenty. But because all the above Sorts are recited on purpose to shew which of them are needles, it will not be difficult in a well-concerted Fount of Hebrew to find room in the Upper-case for the Accents, which will at once allow for the supernumerary Sorts.

In the mean time we are persuaded, that a Sketch of a Hebrew Case, as well as of a Greek one, is best drawn out by him who first has acquainted himself with the number of Sorts in a Fount, and who afterwards knows to dispose of them in such a manner as makes their situation both conformable and collateral: which we had in view in the above specification of Hebrew Sorts. Lastly, we observe, that Hebrew being a Sacred language, is chiefly studied by Divines, who often make use of Points in Theological writings; though plain Hebrew as well as Greek are understood, and very frequently printed, without Points or Accents. But that the use of such Pedagogic Symbols will one time cease, is the hope of all that delight in beholding neat Letter disrobed of all intruders upon its native beauty.

C H A P. XIII.

Of sundry Alphabets, Signs, Symbols, and Characters.

I. The ARABIC Alphabet.

I.	V.	IV.	III.	II.	VI.	VII.
Elif	ا	ا	ا	ا	A	1
Be	ب	ب	ب	ب	B	2
Te	ت	ت	ت	ت	T	400
Thfe	ث	ث	ث	ث	T	500
Gjim	ج	ج	ج	ج	G	3
Hha	ح	ح	ح	ح	Hh	8
Cha	خ	خ	خ	خ	Ch	600
Dal			د	د	D	4
Dhfal			ذ	ذ	D	700
Re	ر	ر	ر	ر	R	200
Ze	ز	ز	ز	ز	Z	7
Sin	س	س	س	س	S	60
Sjin	ش	ش	ش	ش	Sj	300
Sad	ص	ص	ص	ص	S	90
Dad	ض	ض	ض	ض	D	800
Ta	ط	ط	ط	ط	T	9
Da	ظ	ظ	ظ	ظ	D	900
			L 1			Ain

I.	V.	IV.	III.	II.	VI.	VII.
Ain	ع	ع	آ	آ	Ai	79
Gain	غ	غ	آ	آ	G	1000
Fe	ف	ف	ف	ف	F	80
Kaf	ق	ق	ق	ق	K	100
Kef	ك	ك	ك	ك	C	20
Lam	ل	ل	ل	ل	L	30
Mim	م	م	م	م	M	40
Nun	ن	ن	ن	ن	N	50
Waw	و	و		و	W	6
He	ه	ه	ه	ه	H	5
Ie	ي	ي	ي	ي	I	10

The Numerals over the several Columns of this Alphabet are of the following signification, viz.

- I. Shews the Order and Names of the letters.
- II. Exhibits the common letters of the Arabic Alphabet.
- III. Represents the connecting letters in the middle of words.
- IV. Comprehends the proper and absolute Final letters.
- V. Includes the Connecting Final letters.
- VI. Demonstrates the Power or Signification of the Arabic letters.
- VII. Expresses the Numerical contents of the several letters of the Alphabet.

II. The SAMARITAN Alphabet, jointly with the Chaldee, or Hebrew Characters.

Samaritan.	Chaldee.	Names.	Power.	Numbers.	Final.
Ⲁ	א	1 Aleph	Aspiration	1	
ⲁ	ב	2 Beth	B	2	
Ⲃ	ג	3 Gimel	G	3	
ⲃ	ד	4 Daleth	D	4	
Ⲅ	ה	5 He	H	5	
ⲅ	ו	6 Vau	V	6	
Ⲇ	ז	7 Zain	Z	7	
ⲇ	ח	8 Cheth	Ch	8	
Ⲉ	ט	9 Teth	T th	9	
ⲉ	י	10 Iod	I j y	10	
Ⲋ	כ	11 Caph	K	20	ך 500
ⲋ	ל	12 Lamed	L	30	
Ⲍ	מ	13 Mem	M	40	ם 600
ⲍ	נ	14 Nun	N	50	ן 700
Ⲏ	ס	15 Samek	S	60	
ⲏ	ע	16 Ain	H gh ngh	70	
Ⲑ	פ	17 Peh	P ph	80	ף 800
ⲑ	צ	18 Tzade	T tz	90	ץ 900
Ⲓ	ק	19 Coph	K	100	ק 1000
ⲓ	ר	20 Resh	R	200	
Ⲕ	ש	21 Schin	Sh f	300	
ⲕ	ת	22 Tau	T th	400	

The difference between the Hebrew and the Samaritan Text consists in nothing else than the peculiar Characters that are used for one and for the other; the Names and Powers of Letters being the same in both Alphabets.

III. *The Old English, or BLACK Alphabet.*

A	a	A	a
B	b	B	b
C	c	C	c
D	d	D	d
E	e	E	e
F	f	F	f
G	g	G	g
H	h	H	h
I	i	I	i
J	j	J	j
K	k	K	k
L	l	L	l
M	m	M	m
N	n	N	n
O	o	O	o
P	p	P	p
Q	q	Q	q
R	r	R	r
S	s	S	s
T	t	T	t
U	u	U	u
V	v	V	v
W	w	W	w
X	x	X	x
Y	y	Y	y
Z	z	Z	z

IV. *The ETHIOPIC Alphabet.*

አ: Alf.	ሰ: Lawi.
በ: Bet.	ፌ: Mai.
ገ: Geml.	ኔ: Nahas.
ደ: Dent.	ሰ: Saat.
ሐ: Haut.	ፕ: Ain.
ወ: Waw.	ረ: Af.
ዘ: Zai.	ጸ: Tzadai.
ኀ: Hharm.	ቀ: Kof.
ሐ: Tait.	ረ: Rees.
ዞ: Jaman.	ሠ: Saut.
ከ: Caf.	ተ: Tawi.

The Ethiopian Characters are supposed to have been anterior to those of the Egyptians, notwithstanding some assert that most other Nations have received their letters from the last. To strengthen the first, it is observed, that the Ethiopians had two different kinds of letters, viz. the *sacred*, and the *vulgar*; the first for matters of importance, and the other for familiar correspondence. And as the Egyptians observed the same distinction in letters, it is said that their Sacred letters were the vulgar Characters of the Ethiopians; which proves that Letters have been very early among them. But the sacred as well as old vulgar letters of the Egyptians being now lost, the antiquity of Ethiopian Characters is questioned.

The FIGURE, with a brief Account, of CHINESE Characters.

我	xe	孔	cum	耳	ih	一	1
正	chim	氏	xi	文	ven	二	2
四	cie	十	xa	耳	Ih	三	3
人	gin	主	he	非	fi	四	4
文	chi	王	uam	任	çai	五	5
也	yeu	玉	yu	心	finn	元	6
又	ye	全	tejuen			七	7
不	pu	夫	fien			八	8
所	fo	有	ya			九	9
作	ço	月	yva			十	10
音	ynn	从	çum			百	100
事	fu					千	1000

It is observed, 1. That no less than Twenty languages are current in China, all differing from each other; but that the Mandarin is the most elegant and learned, and therefore the most prevailing throughout that Nation.

2. That the Chinese are apt to abridge and to change foreign names, and accordingly call Holland *Olanca*, John Gio, Europe *Sy*, &c.

3. That they have no B D R in their language, and therefore say *Malia* for Maria, *Tata* for Tartaria, *Falani* for Francis, &c.

4. That they use pencils made of Hares-hair, to write, or rather to paint their Characters, in parallel lines, downwards; beginning at the right hand side of their paper.

5. That the Chinese language has scarce 1500 words, which are Monosyllables, and end either in a Vowel, or in m and n, and sometimes in ng. Hence it is that one word often has more than twenty different significations, which are distinguished either by Characters, or Pronunciation.

6. That the manner of speaking Chinese, is not much unlike singing; for by falling and raising the voice, they express the different meaning of synonymous words; which has occasioned P. Jac. Pautoja to invent the five musical sounds, *ut, re, mi, fa, sol*, which he calls *Chinese Accents*, and by which he gives words the proper sound, according to their different significations.

For the rest, the knowledge of Chinese Characters can be of no service to Compositors in Europe; and it is chiefly to oblige the Curious that we have introduced them.

Of Mathematical, Algebraical, and Geometrical Sorts,

+ stands for *plus*, or *and*, or *with*; as, 9 *plus* 3, 9 and 3, 9 with 5.

— signifies *minus*, or *less*; as, 14 *minus* 2, or 14 wanting 2.

= means *equal*; as, $9+3=14-2$: *i. e.* 9 and 3 is parallel or equal to 14 wanting 2.

∞ This sign also denotes *Equal*, but is become obsolete.

× is the sign for Multiplication.

:: shews a Geometrical equal proportion; as, $6.2 :: 12.4$; that is, 6 is to 2, as 12 to 4.

: or ∴ is an Arithmetical equal Proportion; as, $7.3 : 13.9$; *i. e.* 7 is more than 3, as 13 is more than 9.

∴ A continued Geometrical proportion, or Geometrical progression; as, $16.8.4.2.1$; *i. e.* 16 is to 8 as 8 to 4, as 4 to 2, as 2 to 1.

÷ Arithmetical progression, continued; as, $19.16.13.10.7.4$; *i. e.* 19 is more than 16, as 16 is more than 13, as 13 is more than 10, as 10 is more than 7, as 7 is more than 4.

□ Quadrat,

□ Quadrat, or Regular Quadrangle; as, $\square AB = \square BC$; *i. e.* the Quadrangle upon the line AB is equal to the Quadrangle upon the line BC.

△ Triangle; as, $\triangle ABC = \triangle ADC$.

∠ an Angle; as, $\angle ABC = \angle ADC$.

⊥ Perpendicular; as, $AB \perp BC$.

▭ Rectangled Parallelogram; or the Product of two lines.

✓ Radix, Root, or Side of a square.

⊃ Greater.

⊂ Lesser.

—; the Differences, or Excess.

Q or q a Square.

C or c a Cube.

QQ The Ratio of a square number to a square number.

These and several other Signs and Symbols, we meet with in Mathematical and Algebraical works; though Authors do not confine themselves to them, but express their knowledge different ways; yet so as to be understood by those skilled in the Science. In Algebraical work, therefore, in particular, Gentlemen should be very exact in their Copy, and Compositors as careful in following it, that no alterations may ensue after it is composed; since changing and altering work of this nature is more troublesome to a Compositor than can be imagined by one that has not a

tolerable knowledge of Printing. Hence it is, that very few Compositors are fond of Algebra, and rather chuse to be employed upon plain work, though less profitable to them than the former; because it is disagreeable, and injures the habit of an expeditious Compositor besides. In the mean time we venture to say, that the Composing of Algebra might be made more agreeable, were proper Cases contrived for the Letter and Sorts belonging to such work, where it is likely to make a return towards its extraordinary charges.

Of Celestial and Astronomical Signs.

I. The names of the Twelve Signs of the Zodiac.

♈ Aries	♎ Libra
♉ Taurus	♏ Scorpio
♊ Gemini	♐ Sagittarius
♋ Cancer	♑ Capricorn
♌ Leo	♒ Aquarius
♍ Virgo	♓ Pisces.

II. The names of the Seven Planets.

♄ Saturnus	♀ Venus
♃ Jupiter	☿ Mercurius
♂ Mars	☉ Sun ☾ Moon

The names of the Seven Planets imply sometimes the Seven Days of the Week in the following manner; viz.

Dies Solis, is Sunday
Dies Lunæ, Monday
Dies Martis, Tuesday

Dies

Dies Mercurii, Wednesday

Dies Jovis, Thursday

Dies Veneris, Friday

Dies Saturni, Saturday.

♂ The Dragon's Head, and

♀ The Dragon's Tail, are the two Points in which the Eclipses happen.

III. The names of Aspects.

♂ Conjunctio; happens when two Planets stand under each other in the same Sign and Degree.

♀ Oppositio; happens when two Planets stand diametrically opposite each other.

△ Trigonus; happens when one Planet stands from another 4 Signs, or 120 degrees; which make one third part of the Ecliptic.

□ Quadril; happens when two Planets stand 3 Signs from each other, which make 90 degrees, or the fourth part of the Ecliptic.

* Sextil; is the sixth part of the Ecliptic; viz. 2 Signs, which make 60 degrees.

☾ denotes a New Moon.

☾ shews the First Quarter of the Moon.

● tells the Full Moon.

☾ informs us of the Last Quarter of the Moon.

Many are the Signs and Symbols which Astronomers have invented to impose upon the credulity of the Vulgar, who are the chief Supporters of Almanacks; and especially of such as abound in Predictions

of any kind: among which we reckon those Signs which give notice, *On what day* it is proper to let blood; to bathe and to cup: to sow and to plant; to take phyfic; to have one's hair cut; to cut one's nails; to wean children; and many other alike nonsensical observations, to which the class of Rustics in Germany is particularly bigoted; besides giving credit to the Marks that serve to indicate Hail, Thunder, Lightning, or any occult phænomena.

Of some Musical Signs.

Tune and Time are the two chief Characteristics of Musical Notes.

In *Time*, the Distinction, Measure, and Proportion of Notes and Rests are to be observed.

As to Distinction, they have different Characters; and different Names with relation to Time.

The Rests or Pauses are of the same length or quantity with the Notes that stand above them; according to the subsequent Scheme.

☐ is a Semi-breve, with

■ its Rest



Minim, with its Rest



Crotchet, with its Rest



Quaver, with its Rest

Semi-



Semiquaver, with its Rest



Demiquaver, with its Rest

:s: Repeat

↯ Direct

♮ Natural, or Proper

♭ Flat

♯ Sharp.

N. B. In distributing of Musical Notes, particular care ought to be taken to save the edges of the traversing lines from Batters.

Of Physical Signs and Abbreviations.

R Stands for *Recipe*

℔ for a Pound

℥ for an Ounce

ʒ for a Drachma

℥ for a Scruple

j stands for 1 ; ij for 2 ; and so on

ß signifies *semi*, or half

gr. denotes a Grain

One Pound makes 12 Ounces

One Ounce contains 8 Drachmas

One Drachma is equal to 3 Scruples

One Scruple consists of 20 Grains

One Grain has the weight of a Barley-corn

M. signifies a Handful

P. means

P. means so much as can be taken betwixt the ends
of two fingers

P. æq. stands for Equal parts

ana. signifies, So much of one as of the other

q. s. As much as is sufficient

q. p. As much as you please

f. a. According to art.





C H A P. XIV.

SINCE the first appearance of SMITH'S Printer's Grammar, and Mr. LUCKOMBE'S History of Printing, many very useful improvements have been made in the Letter Foundry of Messrs. FRY and Son, which was begun in 1764, and has been continued with great perseverance and assiduity, and at a very considerable expence.

The plan on which they first set out, was an improvement of the Types of the late Mr. BASKERVILLE of Birmingham, eminent for his ingenuity in this line, as also for his curious Printing, many proofs of which are extant, and much admired: But the shape of Mr. CASLON'S Type has since been copied by them with such accuracy as not to be distinguished from those of that celebrated Founder. They have at present Twenty-seven complete Founts in Punches and Matrices of Roman and Italic, besides many sizes of larger Letter cast in Sand; also an elegant assortment of Blacks, with Hebrews and Greeks, and many other

other Orientals: They have also a greater variety of Flowers than are to be met with in any other Foundry in this Kingdom.

The following short SPECIMEN may serve to convey some idea of the Perfection to which that Manufactory is arrived.

A
S P E C I M E N
O F

Printing Types,

B Y

Edmund Fry and Co.

Letter-Founders

T O T H E

Prince of Wales.



London :

PRINTED IN THE YEAR

MDCCLXXXVII.

24 E C I M E N

Printing Types

Comprising the new and

Letter-Foundry

Printed at the

PRINTED

BY THE

PRINTERS

T O
G E O R G E,
PRINCE OF WALES, &c.

This Specimen

IS DEDICATED,
WITH THE UTMOST RESPECT,
BY HIS
MOST FAITHFUL,
AND OBLIGED FRIENDS,

Edmund Fry & Co.

THE OCEAN

AND THE SEA

THE OCEAN

AND THE SEA

THE OCEAN

AND THE SEA

THE OCEAN

AND THE SEA



Five Lines Pica.

A B C D
a b c d e h

Four Lines Pica.

A B C D E
a b c d e f m

Double Pica Two Line Letters.

A B C D E F G
H I J K L M N

Great Primer Two Line Letters.

A B C D E F G
 H I J K L M N
 Γ Δ Θ Ξ Π Σ Τ

English Two Line Letters.

A B C D E F G H
 I J K L M N O P
 Q R S T U V W

Pica Two Line Letters.

A B C D E F G H I J
 K L M N O P Q R S

Small Pica Two Line Letters.

A B C D E F G H I K L
 M N O P Q R S T U V

Long Primer Two Line Letters.

A B C D E F G H I J K M
L N O P Q R S T U V W

Bourgeois Two Line Letters.

A B C D E F G H I J K L M
O P Q R S T U V W X Y Z

Brevier Two Line Letters.

A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z Æ

Nonpareil Two Line Letters.

A B C D E F G H I K L M N
J O P Q R S T U V W X Y Z

Pearl Two Line Letters.

A B C D E F G H I J K L M N O
P Q R S T U V W Y Z Æ Œ

Diamond Two Line Letters.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

French Canon.

A B C D E F G

Quousque tr

A B C D E F G

Quousque tan-

Two Lines Great Primer.

Quousque tandem

abutere, Catilina,

A B C D E F G H I J

*Quousque tandem a-**butere, Catilina, pat-*

A B C D E F G H I M

Two Lines English.

Quousque tandem ab-
utere, Catilina, patien
A B C D E F G H I J K L

*Quousque tandem abutere,
Catilina, patientia nostra?
A B C D E F G H I J K M*

Double Pica Roman.

Quousque tandem abutêre, Ca-
tilina, patientia nostra? quam-
diu nos etiam furor iste tuus
A B C D E F G H I J K L M N O P

Double Pica Italic.

*Quousque tandem abutêre Catilina,
patientia nostra? quamdiu nos e-
tiam furor iste tuus eludet? quem
A B C D E F G H I J K L M N O P*

Great Primer Roman, No. 1.

Quousque tandem abutère, Catilina,
 patientia nostra? quamdiu nos etiam
 furor iste tuus eludet? quem ad fi-
 nem sese effrenata jactabit audacia?
 A B C D E F G H I J K L M N O P Q

Great Primer Italic, No. 1.

*Quousque tandem abutère, Catilina, pa-
 tientia nostra? quamdiu nos etiam furor
 iste tuus eludet? quem ad finem sese eff-
 renata jactabit audacia? nihilne te noc-
 A B C D E F G H I J K L M N O P Q*

Great Primer Roman, No. 2. (New)

Quousque tandem abutère, Catilina,
 patientia nostra? quamdiu nos etiam
 furor iste tuus eludet? quem ad finem
 sese effrenata jactabit audacia? nihilne
 A B C D E F G H I J K L M N O P

Great Primer Italic, No. 2. (New)

*Quousque tandem abutère, Catilina, pa-
 tientia nostra? quamdiu nos etiam furor
 iste tuus eludet? quem ad finem sese ef-
 frenata jactabit audacia? nihilne te noc-
 A B C D E F G H I J K L M N O P*

ENGLISH ROMAN, No. 1.

Quousque tandem abutêre, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præ-
A B C D E F G H I J K L M N O P Q R S T

ENGLISH ROMAN. No. 2.

Quousque tandem abutêre, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium pala-
A B C D E F G H I J K L M N O P Q R S T

English Italic. No. 2.

Quousque tandem abutêre, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil
A B C D E F G H I J K L M N O P Q R S

ENGLISH ROMAN. No. 3. (New)

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii,
A B C D E F G H I J K L M N O P Q R S T

English Italic. No. 3. (New)

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis
A B C D E F G H I J K L M N O P Q R S

PICA ROMAN. No. 1.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium,
 A B C D E F G H I J K L M N O P Q R S T U V

PICA ROMAN. No. 2.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium,
 A B C D E F G H I J K L M N O P Q R S T U V

Pica Italic. No. 2.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic mu-
A B C D E F G H I J K L M N O P Q R S T U V

PICA ROMAN. No. 3. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ nihil timor populi, nihil consensus bonorum omnium,
 A B C D E F G H I J K L M N O P Q R S T U V

Pica Italic. No. 3. (New)

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, ni-
A B C D E F G H I J K L M N O P Q R S T U V W

SMALL PICA ROMAN. No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua
 A B C D E F G H I J K L M N O P Q R S T U V W X

Small Pica Italic. No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis?
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

SMALL PICA ROMAN. No. 2. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua
 A B C D E F G H I J K L M N O P Q R S T U V W X

Small Pica Italic. No. 2. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? consuetam
 A B C D E F G H I J K L M N O P Q R S T U V W X Y

LONG PRIMER ROMAN. No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? con-
 ABCDEFGHIJKLMNOPQRSTUVWXYZÆÆ

LONG PRIMER ROMAN. No. 2.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum
 ABCDEFGHIJKLMNOPQRSTUVWXYZÆÆ

Long Primer Italic. No. 2.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? pateret tua consilia non sentis? constrictam jam omnium ho-
ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

LONG PRIMER ROMAN. No. 3. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? con-
 ABCDEFGHIJKLMNOPQRSTUVWXYZÆ

Long Primer Italic. No. 3. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia
ABCDEFGHIJKLMNOPQRSTUVWXYZ

BURGEOIS ROMAN, No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad cædem unumquemque

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Burgois Italic, No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ

BURGEOIS ROMAN. No. 2. (NEW)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ

Burgois Italic. No. 2. (New.)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus? nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii par-

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ

BREVIER ROMAN, No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Brevier Italic, No. 1.

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ

BREVIER ROMAN, No 2. (New)

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Brevier Italic, No. 2. (New)

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

NEW BREVIER ROMAN. No. 2. (Close).

Quousque tandem abutère, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

New Brevier Italic. No. 2. (Close)

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihilne te nocturnum præsidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil consensus bonorum omnium, nihil hic munitissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constrictam jam omnium horum conscientia teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Æ Æ

Nonpareil Roman.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata iactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic inmutissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constructam teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci iussu consulis jam pridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum mediocriter labefactantem statum reipublicae privatus interfecit: Catilinam vero orbem terrae caede atque incendiis vastare cupientem non canutes perferemus? nam illa nimis

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Nonpareil Italic.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata iactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic inmutissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constructam teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci iussu consulis jam pridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum mediocriter labefactantem statum reipublicae privatus interfecit: Catilinam vero orbem terrae caede atque incendiis vastare cupientem non canutes perferemus? nam illa nimis

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEARL Roman.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata iactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic inmutissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constructam teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci iussu consulis jam pridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum mediocriter labefactantem statum reipublicae privatus interfecit: Catilinam vero orbem terrae caede atque incendiis vastare cupientem nos consules perferemus? nam illa nimis antiqua praeterea, quod Quintus Servilius Ahala Sp. Melium, novis rebus studentem manu sua occidit.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PEARL Italic.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata iactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic inmutissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constructam teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci iussu consulis jam pridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum mediocriter labefactantem statum reipublicae privatus interfecit: Catilinam vero orbem terrae caede atque incendiis vastare cupientem nos consules perferemus? nam illa nimis antiqua praeterea, quod Quintus Servilius Ahala Sp. Melium, novis rebus studentem manu sua occidit.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

DIAMOND.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata iactabit audacia? nihilne te nocturnum praesidium palatii, nihil urbis vigiliae, nihil timor populi, nihil consensus bonorum omnium, nihil hic inmutissimus habendi senatus locus, nihil horum ora vultusque moverunt? patere tua consilia non sentis? constructam teneri conjurationem tuam non vides? quid proxima, quid superiore, nocte egeris, ubi fueris, quos convocaveris, quid consilii ceperis, quem nostrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, consul vidit: hic tamen vivit. Vivit? imo vero etiam in senatum venit: fit publici consilii particeps: notat et designat oculis ad eadem unumquemque nostrum. Nos autem viri fortes satisfacere reipublicae videmur, si istius furorem ac tela vitemus. Ad mortem te, Catilina, duci iussu consulis jam pridem oportebat: in te conferri pestem istam, quam tu in nos omnes jamdiu machinaris. An vero vir amplissimus, P. Scipio, pontifex maximus, Tiberium Gracchum mediocriter labefactantem statum reipublicae privatus interfecit: Catilinam vero orbem terrae caede atque incendiis vastare cupientem nos consules perferemus? nam illa nimis antiqua praeterea, quod Quintus Servilius Ahala Sp. Melium, novis rebus studentem manu sua occidit.


A B C D E F G H I J K L M N O P Q R S T U V W X Y Z . Æ

N. B. This is the Smallest Letter in the World.

A T A B L E,

Shewing how the following PIECES of
METAL SPACE - LINES

May be combined to the Length of any Number of PICA m's, from Eleven to Fifty, with only three Pieces in the longest Line; and from Fifty to an Hundred, with no more than six Pieces in the longest Line.

 The different Sizes are

FRENCH CANON
Two Lines GREAT PRIMER
Two Lines ENGLISH
DOUBLE PICA
GREAT PRIMER
ENGLISH

PICA
SMALL PICA
LONG PRIMER
BURGEOIS
BREVIER
MINION

NONPAREIL
PEARL
DIAMOND
HAIR LINE.

The Length of each Piece.

4, 7, 9, 13, 15, 20,

7	4	13	7	15	9	13	9	15	20	7	15	15	20	9
4	4		7		7	4	9	4		7	7	4	4	9
	4									7		4		7
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
13	20	15	20	15	20	15	20	15	20	20	15	20	15	20
13	7	13	9	15	7	13	13	15	15	9	15	9	15	20
				4	4	4		4		7	7	9	9	
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
15	20	15	20	15	20	20	20	20	20	20	15	20	20	20
13	15	15	20	15	13	20	15	20	15	20	15	20	20	20
13	7	13	4	15	13	7	13	9	15	7	15	13	7	15
						7				4	7		7	
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
20	20	20	20	20	20	20	15	20	15	20	20	20	20	20
9	13	9	15	20	7	13	15	15	15	13	20	15	20	15
7	4	9	4		7	9	13	9	15	13	7	13	9	15
					7									
56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
20	15	20	20	20	20	20	20	20	20	20	20	20	20	20
20	15	20	20	20	20	20	20	20	20	15	20	15	20	25
7	15	13	7	15	9	13	9	15	20	13	15	15	20	15
4	7		7		7	4	9	4		13	7	13	4	15
71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
20	20	20	20	20	20	15	20	15	20	20	20	20	20	20
13	20	15	20	15	20	15	20	15	20	20	20	20	20	20
13	7	13	9	15	7	15	13	15	15	9	13	9	15	20
					4	7		9		7	4	9	4	
86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

Many of the Lengths may be made of different Pieces than those in the above TABLE, as for Example, 30 m's may be made not only of two Fifteen's, but also of 15, 7, 4, 4, (30) 9, 7, 7, 7, (30) 13, 13, 4, (30) 13, 9, 4, 4, (30) 7, 7, 4, 4, 4, 4, (30) and so in many others, which is a very considerable Advantage.

Two Lines Great Primer Black.

And be it further he
reby enacted, That

Double Pica Black.

And be it further hereby ena-
cted, That the Mayors, Bai-
liffs, or other head Officers,

Great Primer Black.

And be it further hereby enacted,
That the Mayors, Bailiffs, or o-
ther head Officers of every Town
and place corporate, and City wit-

English Black. No. 1.

And be it further hereby enacted, That the
Mayors, Bailiffs, or other head Officers
of every Town and place corporate, and
City within this Realm, being Justice or
Justices of Peace, shall have the same au-

English Black No. 2.

And be it further hereby enacted, That the Ma-
yors, Bailiffs, or other head Officers of every
Town and place corporate, and City within
this Realm, being Justice or Justices of Peace,
shall have the same authority by virtue of this

Pica Black, No. 1.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this
 A B C D E F G H I J K L M N O P Q R S

Pica Black No. 2.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this
 A B C D E F G H I J K L M N O P Q R S T

Small Pica Black.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Sessions, as at their Sessions, if they hold any, as is herein limited, prescribed and appointed to Justices of
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Long Primer Black.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Sessions, as at their Sessions, if they hold any, as is herein limited, prescribed and appointed to Justices of
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Brevier Black.

And be it further hereby enacted, That the Mayors, Bailiffs, or other head Officers of every Town and place corporate, and City within this Realm, being Justice or Justices of Peace, shall have the same authority by virtue of this Act, within the limits and precincts of their Jurisdictions, as well out of Sessions, as at their Sessions, if they hold any, as is herein limited, prescribed and appointed to Justices of Peace of the County, or any two or more of them, or to the Justices of Peace in their
 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Two Lines Great Primer Hebrew.

בראשית ברא אלהים
את השמים ואת
הארץ : והארץ היתה
תהו ובהו וחשך על-
פני תהום ורוח אלהים
מרחפת על-פני המים :

Two Lines Great Primer Hebrew, with Points.

בְּרֵאשִׁית בְּרָא אֱלֹהִים
אֶת הַשָּׁמַיִם וְאֶת
הָאָרֶץ : וְהָאָרֶץ הָיְתָה
תְּהוֹ וּבְהוֹ וְחָשָׁךְ עַל-
פְּנֵי תְהוֹם וְרוּחַ אֱלֹהִים
מְרַחֶפֶת עַל-פְּנֵי הַמַּיִם :

Two Lines English Hebrew.

בראשית ברא אלהים את
 השמים ואת הארץ : והארץ
 היתה תהו ובהו וחשך על-פני
 תהום ורוח אלהים מרחפת
 על-פני המים : ויאמר אלהים
 יהי אור ויהי-אור : וירא אל
 הים את-האור כי-טוב ויבדל
 אלהים בין האור ובין החשך :

Two Lines English Hebrew, with Points.

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת
 הַשָּׁמַיִם וְאֶת הָאָרֶץ : וְהָאָרֶץ
 הִיְתָח תְּהוּ וּבְהוּ וַחֲשָׁךְ עַל-פְּנֵי
 תְהוֹם וְרוּחַ אֱלֹהִים מְרַחֶפֶת
 עַל-פְּנֵי הַמַּיִם : וַיֹּאמֶר אֱלֹהִים
 יְהִי אוֹר וַיְהִי-אוֹר : וַיֵּרָא אֶל
 הַיָּם אֶת-הָאוֹר כִּי-טוֹב וַיַּבְדֵּל
 אֱלֹהִים בֵּין הָאוֹר וּבֵין הַחֹשֶׁךְ :

Double Pica Hebrew. No. 1.

בראשית ברא אלהים את השמים
 ואתה ארץ: והארץ היתה תהו ובהו
 וחשך על-פני תהום ורוח אלהים מר-
 חפת על-פני המים: ויאמר אלהים
 יהי אור ויהי-אור: וירא אלהים את-
 האור כי-טוב ויברל אלהים בין האור

Double Pica Hebrew. No. 2.

בראשית ברא אלהים את השמים
 ואת הארץ: והארץ היתה תהו ובהו
 וחשך על-פני תהום ורוח אלהים
 מרחפת על-פני המים: ויאמר אלהים
 יהי אור ויהי-אור: וירא אלהים את-
 האור כי-טוב ויברל אלהים בין האור

Double Pica Hebrew. No. 2. with Points.

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם
 וְאֶת הָאָרֶץ: וְהָאָרֶץ הָיְתָה תְהוֹ וּבְהוֹ
 וְחָשֶׁךְ עַל-פְּנֵי תְהוֹם וְרוּחַ אֱלֹהִים
 מְרַחֶפֶת עַל-פְּנֵי הַמַּיִם: וַיֹּאמֶר אֱלֹהִים
 יְהִי אוֹר וַיְהִי-אוֹר: וַיֹּרֶא אֱלֹהִים אֶת-
 הָאוֹר כִּי-טוֹב וַיְבָרֶךְ אֱלֹהִים בֵּין הָאוֹר

English Hebrew. No. 1.

בראשית ברא אלהים את השמים ואת הארץ:
והארץ היתה תהו ובהו וחשך על־פני תהום ורוח
אלהים מרחפת על־פני המים: ויאמר אלהים יהי
אור ויהי־אור: וירא אלהים את־האור כי־טוב ויבדל
אלהים בין האור ובין החשך: ויקרא אלהים לאור
יום ולחשך קרא לילה ויהי־ערב ויהי־בקר יום

English Hebrew. No. 2.

בראשית ברא אלהים את השמים ואת הארץ:
והארץ היתה תהו ובהו וחשך על־פני תהום ורוח
אלהים מרחפת על־פני המים: ויאמר אלהים יהי
אור ויהי־אור: וירא אלהים את־האור כי־טוב ויבדל
אלהים בין האור ובין החשך: ויקרא אלהים לאור
יום ולחשך קרא לילה ויהי־ערב ויהי־בקר יום

English Hebrew, No. 2. with Points.

בְּרֵאשִׁית בָּרָא אֱלֹהִים אֶת הַשָּׁמַיִם וְאֶת הָאָרֶץ:
וְהָאָרֶץ הָיְתָה תְהוֹ וּבְהוֹ וְחָשֶׁךְ עַל־פְּנֵי תְהוֹם וְרוּחַ
אֱלֹהִים מְרַחֶפֶת עַל־פְּנֵי הַמַּיִם: וַיֹּאמֶר אֱלֹהִים יְהִי
אוֹר וַיְהִי־אוֹר: וַיַּרְא אֱלֹהִים אֶת־הָאוֹר כִּי־טוֹב וַיַּבְדֵּל
אֱלֹהִים בֵּין הָאוֹר וּבֵין הַחָשֶׁךְ: וַיִּקְרָא אֱלֹהִים לְאוֹר
יוֹם וּלְחָשָׁךְ קָרָא לַיְלָה וַיְהִי־עֶרֶב וַיְהִי־בֹקֶר יוֹם

Pica Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ
היתה תהו ובהו וחשך על־פני תהום ורוח אלהים מרחפת
על־פני המים: ויאמר אלהים יהי אור ויהי־אור: וירא אלהים
את־האור כי־טוב ויבדל אלהים בין האור ובין החשך:
ויקרא אלהים לאור יום ולחשך קרא לילה ויהי־ערב ויהי־
בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי

Small Pica Hebrew.

בראשית ברא אלהים את השמים ואת הארץ: והארץ היתה תהו ובהו
וחשך על־פני תהום ורוח אלהים מרחפת על־פני המים: ויאמר אלהים
יהי אור ויהי־אור: וירא אלהים את־האור כי־טוב ויבדל אלהים בין
האור ובין החשך: ויקרא אלהים לאור יום ולחשך קרא לילה ויהי־ערב
ויהי־בקר יום אחד: ויאמר אלהים יהי רקיע בתוך המים ויהי מברק
בין מים למים: ויעש אלהים את־הרקיע ויבדל בין המים אשר מתחת

Burgois Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו והשך
 על-פני תהום ורוח אלהים מרחפת על-פני המים : ויאמר אלהים יהי אור
 ויהי-אור : וירא אלהים את-האור כי-טוב ויבדל אלהים בין האור ובין ההשך :
 ויקרא אלהים לאור יום ולחשך קרא לילה ויהי-ערב ויהי-בקר יום אחד :
 ויאמר אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים : וישע
 אלהים את-הרקיע ויבדל בין המים אשר מתחת לרקיע ובין המים אשר מעל
 לרקיע ויהי-כן : ויקרא אלהים לרקיע שמים ויהי-ערב ויהי-בקר יום שני :
 ויאמר א. הים יקוו המים מתחת השמים אל-מקום אחד ותראה היבשה ויהי-כן :

Brevier Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו והשך על-פני
 תהום ורוח אלהים מרחפת על-פני המים : ויאמר אלהים יהי אור ויהי-אור : וירא
 אלהים את-האור כי-טוב ויבדל אלהים בין האור ובין ההשך : ויקרא אלהים לאור
 יום ולחשך קרא לילה ויהי-ערב ויהי-בקר יום אחד : ויאמר אלהים יהי רקיע בתוך
 המים ויהי מבדיל בין מים למים : ויעש אלהים את-הרקיע ויבדל בין המים אשר מתחת
 לרקיע ובין המים אשר מעל לרקיע ויהי-כן : ויקרא אלהים לרקיע שמים ויהי-ערב
 ויהי-בקר יום שני : ויאמר אלהים יקוו המים מתחת השמים אל-מקום אחד ותראה
 היבשה ויהי-כן : ויקרא אלהים ליבשה ארץ ולמקוה המים קרא ימים וירא אלהים
 כי-טוב : ויאמר אלהים תרשא הארץ רשא עשב מזריע זרע עץ פרי עשה פרי למין

Small Pica Rabbinical Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו והשך
 על פני תהום ורוח אלהים מרחפת על פני המים : ויאמר אלהים יהי אור ויהי
 אור : וירא אלהים את האור כי טוב ויבדל אלהים בין האור ובין ההשך : ויקרא
 אלהים לאור יום ולחשך קרא לילה ויהי ערב ויהי בקר יום אחד : ויאמר אלהים
 יהי רקיע בתוך המים ויהי מבדיל בין מים למים : ויעש אלהים את הרקיע ויבדל
 בין המים אשר מתחת לרקיע ובין המים אשר מעל לרקיע ויהי כן : ויקרא
 אלהים לרקיע שמים ויהי ערב ויהי בקר יום שני : ויאמר אלהים יקוו המים

Brevier Rabbinical Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו והשך על פני תהום
 ורוח אלהים מרחפת על פני המים : ויאמר אלהים יהי אור ויהי אור : וירא אלהים את
 האור כי טוב ויבדל אלהים בין האור ובין ההשך : ויקרא אלהים לאור יום ולחשך קרא
 לילה ויהי ערב ויהי בקר יום אחד : ויאמר אלהים יהי רקיע בתוך
 המים ויהי מבדיל בין מים למים : ויעש אלהים את הרקיע ויבדל בין המים אשר
 מתחת לרקיע ובין המים אשר מעל לרקיע ויהי כן : ויקרא אלהים לרקיע שמים ויהי
 ערב ויהי בקר יום שני : ויאמר אלהים יקוו המים מתחת השמים אל-מקום אחד ותראה
 היבשה ויהי כן : ויקרא אלהים ליבשה ארץ ולמקוה המים קרא ימים וירא אלהים
 כי-טוב : ויאמר אלהים תרשא הארץ רשא עשב מזריע זרע עץ פרי עשה פרי למין וירא

Nonpareil Rabbinical Hebrew.

בראשית ברא אלהים את השמים ואת הארץ : והארץ היתה תהו ובהו והשך על פני תהום ורוח אלהים
 מרחפת על פני המים : ויאמר אלהים יהי אור ויהי אור : וירא אלהים את האור כי טוב ויבדל אלהים בין
 האור ובין ההשך : ויקרא אלהים לאור יום ולחשך קרא לילה ויהי ערב ויהי בקר יום אחד : ויאמר
 אלהים יהי רקיע בתוך המים ויהי מבדיל בין מים למים : ויעש אלהים את הרקיע ויבדל בין המים אשר
 מתחת לרקיע ובין המים אשר מעל לרקיע ויהי כן : ויקרא אלהים לרקיע שמים ויהי ערב ויהי בקר יום
 שני : ויאמר אלהים יקוו המים מתחת השמים אל-מקום אחד ותראה היבשה ויהי כן : ויקרא אלהים

Double Pica Script, Ornamented.

Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jactabit audacia? nihiline te nocturnum praesidium palatii,

Great Primer Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἀγιασθήτω τὸ ὄνομά σου. Ελθέτω ἡ βασιλεία σου· γενηθήτω τὸ θέλημά σου, ὡς ἐν οὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δός ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τοῦ πονηροῦ· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν·

Pica Greek.

ΠΑτερ ἡμῶν ὁ ἐν τοῖς οὐρανοῖς· ἀγιασθήτω τὸ ὄνομά σου. Ελθέτω ἡ βασιλεία σου· γενηθήτω τὸ θέλημά σου, ὡς ἐν οὐρανῷ, καὶ ἐπὶ τῆς γῆς. Τὸν ἄρτον ἡμῶν τὸν ἐπιούσιον δός ἡμῖν σήμερον. Καὶ ἄφες ἡμῖν τὰ ὀφειλήματα ἡμῶν, ὡς καὶ ἡμεῖς ἀφίεμεν τοῖς ὀφειλέταις ἡμῶν. Καὶ μὴ εἰσενέγκῃς ἡμᾶς εἰς πειρασμόν, ἀλλὰ ῥῦσαι ἡμᾶς ἀπὸ τῆς πονηρίας· ὅτι σοῦ ἐστὶν ἡ βασιλεία, καὶ ἡ δύναμις, καὶ ἡ δόξα εἰς τοὺς αἰῶνας. ἀμήν·

ALEXANDRIAN GREEK.

ΠΑΤΕΡ ΗΜΩΝ Ο ΕΝ ΤΟΙΣ ΟΥΡΑΝΟΙ
 Σ ΑΓΙΑΣΘΗΤΩ ΤΟ ΟΝΟΜΑ ΣΟΥ Ε
 ΛΘΕΤΩ Η ΒΑΣΙΛΕΙΑ ΣΟΥ ΓΕΝΗΘΗΤΩ Τ
 Ο ΘΕΛΗΜΑ ΣΟΥ ΩΣ ΕΝ ΟΥΡΑΝΩ ΚΑΙ Ε
 ΠΙ ΤΗΣ ΓΗΣ ΤΟΝ ΑΡΤΟΝ ΗΜΩΝ ΤΟΝ
 ΕΠΤΙΟΥΣΙΟΝ ΔΙΔΟΥ ΗΜΕΙΝ ΤΟ ΚΛΟ Η
 ΜΕΡΑ ΚΑΙ ΑΦΕΣ ΗΜΙΝ ΤΑ ΣΑΜΑΡΤΙΑΣ Η
 ΜΩΝ ΚΑΙ ΓΑΡΟΥ ΤΟΙ ΑΦΙΟΜΕΝ ΠΑΝΤΙ
 ΟΦΕΙΛΟΝΤΙ ΗΜΕΙΝ ΚΑΙ ΜΗ ΕΙΣΕΝΕΓΚΗΣ
 ΗΜΑΣ ΕΙΣ ΠΤΕΙΡΑΣΜΟΝ ΑΛΛΑ ΡΥΣΑΙ ΗΜΑ
 Σ ΑΠΟ ΤΟΥ ΠΤΟΝΗΡΟΥ ΟΤΙ ΣΟΥ ΕΣΤΙ
 Ν Η ΒΑΣΙΛΕΙΑ ΚΑΙ Η ΔΥΝΑΜΙΣ ΚΑΙ Η Δ
 ΟΞΑ ΕΙΣ ΤΟΥΣ ΑΙΩΝΑΣ ΑΜΗΝ

*THE Proprietors of this Foundry respectfully acquaint
 their Friends and the Curious, both in and out of the Print-
 ing Trade, that the above Greek is cut in exact Imitation
 of that ancient and valuable Manuscript of the New Tes-
 tament, now in the British Museum, which was presented to
 King Charles the First, in 1628, by Cyrillus Lucaris, Pà-
 triarch of Alexandria, (whence it derives its name) but af-
 terwards of Constantinople, and is supposed to have been
 written upwards of Fourteen Hundred Years.*

Pica Samaritan.

: שׂאֲרֵיכֶם אֲנִי מֵינִי מֵינִי מֵינִי : שׂאֲרֵיכֶם אֲנִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי

Long Primer Samaritan.

שׂאֲרֵיכֶם אֲנִי מֵינִי מֵינִי מֵינִי : שׂאֲרֵיכֶם אֲנִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי
 אֲנִי מֵינִי : מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי מֵינִי

ARABIC, on English Body, with Points.

لا تأخذ لك صورة * ولا تمثّل كل ما في السماء من فوق *
 وما في الارض من اسفل * ولا ما في الماء من تحت الارض *
 لا تسجد لهنّ * ولا تعبدهنّ * فإني أنا الرب الالهك الاله
 غيور * اجترى ذنوب الآباء من الابناء الي ثلاثة و(الي)
 اربعة اجيال للذين يبغضوني * وافعل الحسنة الي الف
 (جيل) لاحبابي وحافظي وصابري آمين

PERSIAN.

این سخن بر دل دهقان کارکر آمده بلبلا آزاد کرد بلبلا زبانی
 بازادی کشاد و بگفت چون با من نکوی بحکم هل جرا الاحسان
 الا الاحسان مکافات آن باید کرد بدان که در زیر درخت که ایستاده
 آفتابه است پر از زر بردار و در حواشی خود صرف کن دهقان آن
 محلا را بگاوید و سخن بلبلا درست یافت گفت ای بلبلا عجب
 که آفتابه زرا در زیر زمین می بینی و دام در زیر خاک

TURKISH.

يَبْزُومُ اَتَمَزْكَه كُوكُلْدَه سِيْن سَنَكْ اَدَنَكْ مَقْدَسْ اُولْسُون سَنَكْ
 مَلَكُوتْكَ كَلْسُون سَنَكْ اَرَاَدَنَكْ اُولْسُون تَتَه كِيْم كُوكْدَه دَخِي
 يَبْزُوم هَر كُونْكَي يَبْزُوم اَتَمَكْ مَوْزِي وَيَرْ يَبْزَه بُوْكَون وَيَبْزُوم بُو
 رْجَارُومِي يَبْزَه بَغْشَلَه تَتَه كِيْم يَبْز دَخِي يَبْزُوم بُوْر خُلُولُومْزَه
 بَغْشَلُوز وَيَبْزِي تَجْرِيْبَه اِدْخَال اَيْتْمَه لَكِنْ شَرِيْبْدَنْ يَبْزِي نَجَاتْ
 اَيْلَه رِيْرَا سَنُوكْدَرْ مَلَكُوتْ وَسَلْطَانَتْ وَمَجِيْد تَا اَبْدْ آمِيْن

TARTARIC.

يَا بَابَا مَزْكَه يُو كَسَكْ ثُوْكَدَه سَن اَدَنَكْ آري اُولْسُون پَادَشَه
 هَلْغَشْكَ كَلْسُون بُوِيْرَقَارْكَ اَتْمَشْ اُولْسُون ثُوْكَدَه كَبِي دَخِي
 يَبْزَه هَر كُونْكَي اَلْمَكْمُوزِي وَيَرْ يَبْزَه بُوْكَون و بُوْرْجَارُومِي
 يَبْزَه بَغْشَلَه تَتَكَمْ يَبْز دَخِي بُوْرْجَلُولُومْزِي بَغْشَلُوز وَيَبْزِي
 صِيْنَشَه كُتُورْمَه لَكِنْ يَرْمَزْدَنْ يَبْزِي صَالِي وَيَرْ زِيْزَا كَه سَنَكْدَرْ
 پَادَشَاهَلَه وَقَادِرْتَه وَبُوِيْوَكَلْتَه تَا جَاوِيْد جَاوِيْدَانَه آمِيْن

MALAYAN.

بَاقَا كِيْت يَغْ اَدْ دَسْرُكْ نَامْ مَوِيْد بَرْ سَكْتِ رَاَجَتْ مَوْ مَنَارْغْ
 قَدَتْ مَوْ مَنِيْد دْ بَوْمْ سَقْرَتْ دْ سَرْكَ رَتْ كِيْت دَرْ سَهْرْ هَر
 مَمْبِرِيْكَنْ كِيْت سَهْرْ اَيْنْدْ مَكْ بَرِ اَمَقُونْلْ قَدْ كِيْت دَسْ كِيْت سَقْرَتْ
 كِيْت بَرِ اَمَقُونَاكِيْ سِيْآقْ بَرِ سَلْ كَتْدْ كِيْت جَاغْنْ هَنْتَرْ كِيْت كَقْدْ
 چُوْبِهِيْنْ تَتَاقْ لَقْسَكْنْ دَارِ يَغْ جَاكْتْ قَرْنْ مَوْ قُوْثْ رَاَجَتْ دَانْ
 قَوْسَهْنْ دَانْ بَاسَرَنْ سَمَقْ كُكَاكْلْ آمِيْن

English Æthiopic.

እቡኑ፡ ዘበሰላላ፡ ይትቀደስ፡ ስሎብ፡ ትመጻእ፡ መንግሥት
 ሥትከ፡ ይኩን፡ ፍቃድ፡ በከመ፡ በሰላላ፡ ወበመድረፍ፡
 ሲሳዩ፡ ዘለለ፡ ዕለተኑ፡ ሀበኑ፡ ዮሐን፡ ኃድግ፡ ለኑ፡ እበሰኑ፡
 ከመ፡ ንሐኔ፡ ንኃድግ፡ ለዘ፡ እበሰ፡ ለኑ፡ ወሊቲብእ፡
 ወስተ፡ መንሲት፡ እለ፡ እድኃኔ፡ ወባልሐኑ፡ እመኩሉ፡
 እኩይ፡ እከመ፡ ዚእከ፡ ይእቲ፡ መንግሥት፡ ኃይል፡ ወስብ
 ሐት፡ ለዓለመ፡ ዓለመ፡ እጫኑ፡ እቡኑ፡ ዘበሰላላ፡ ይ
 ትቀደስ፡ ስሎብ፡ ትመጻእ፡ መንግሥት፡ ይኩን፡ ፍቃድ

Pica Æthiopic.

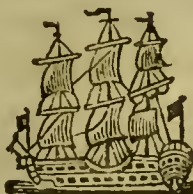
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 ይኩን፡ ፍቃድ፡ በከመ፡ በሰላላ፡ ወበመድረፍ፡ ሲሳዩ፡ ዘለለ፡
 ዕለተኑ፡ ሀበኑ፡ ዮሐን፡ ኃድግ፡ ለኑ፡ እበሰኑ፡ ከመ፡ ንሐኔ፡ ንኃ
 ድግ፡ ለዘ፡ እበሰ፡ ለኑ፡ ወሊቲብእ፡ ወስተ፡ መንሲት፡ እለ፡
 እድኃኔ፡ ወባልሐኑ፡ እመኩሉ፡ እኩይ፡ እከመ፡ ዚእከ፡ ይእ
 ቲ፡ መንግሥት፡ ኃይል፡ ወስብሐት፡ ለዓለመ፡ ዓለመ፡ እጫኑ፡
 እቡኑ፡ ዘበሰላላ፡ ይትቀደስ፡ ስሎብ፡ ትመጻእ፡ መንግሥት
 ይኩን፡ ፍቃድ፡ በከመ፡ በሰላላ፡ ወበመድረፍ፡ ሲሳዩ፡ ዘለለ፡



KING'S ARMS, Five Lines Pica.



SHIPS, Five Lines Pica. No. 1.



No. 2.



Two Lines Double Pica.



Two Lines Great Primer.



CHECK, Four Lines Pica.



Two Lines Great Primer.



F L O W E R S.

Four Lines Pica Flower.



French Canon Flower.



Two Lines English Flowers. No. 1.



No. 2.



Double Pica Flowers. No. 1.



No. 2.



No. 3.



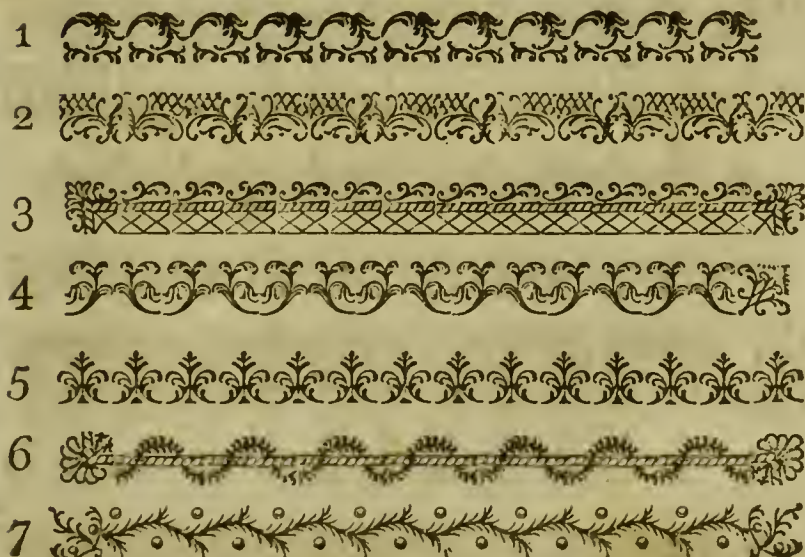
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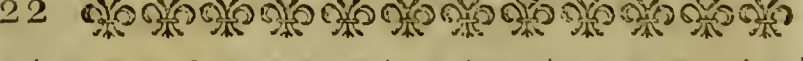
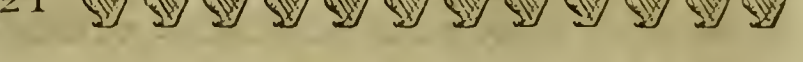
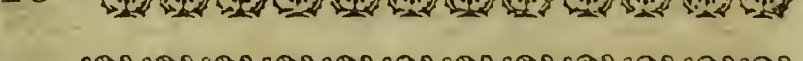
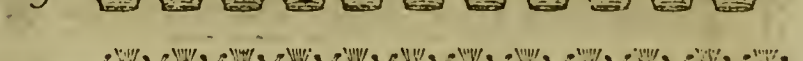
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Great Primer Flowers.



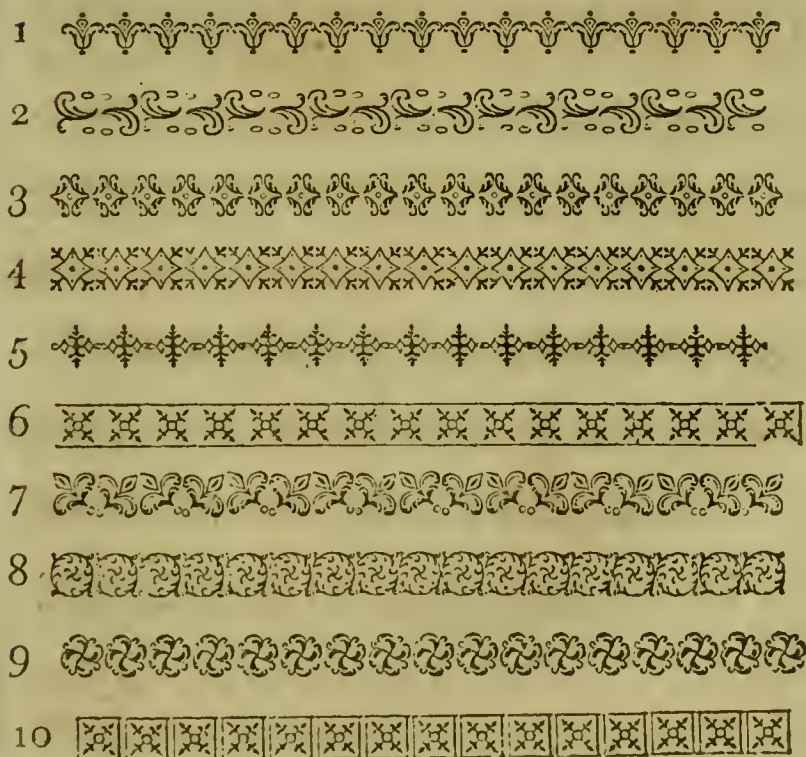
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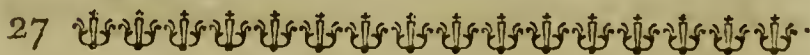
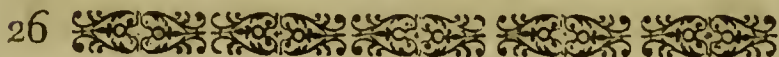
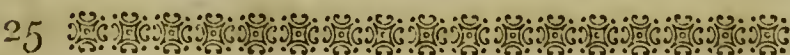
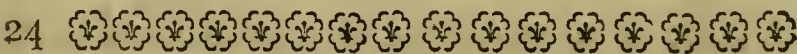
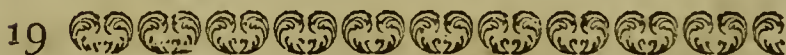
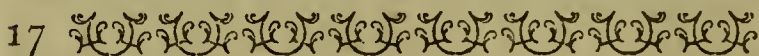
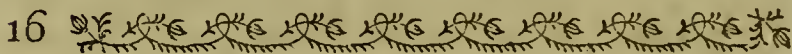
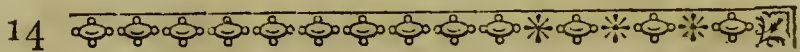
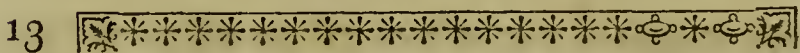
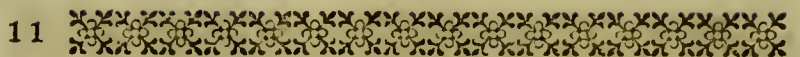
Great Primer Flowers.



English Flowers.



English Flowers.






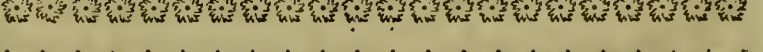
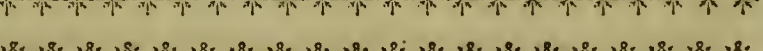
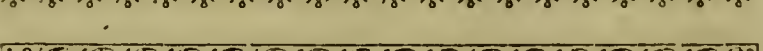
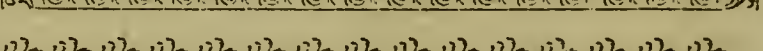

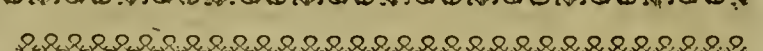
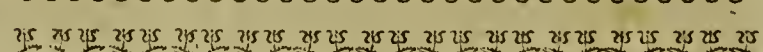
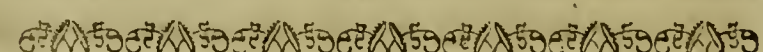
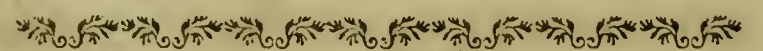
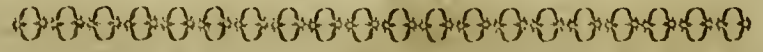


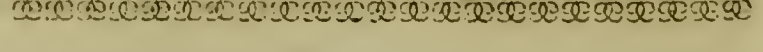

Pica Flowers.

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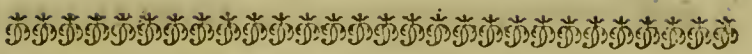
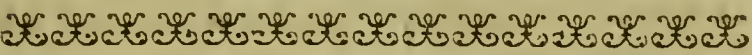
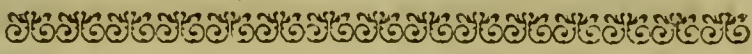
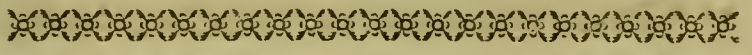
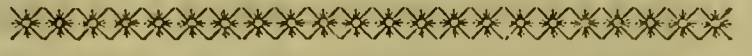
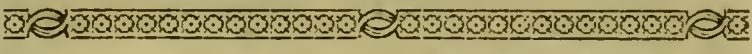

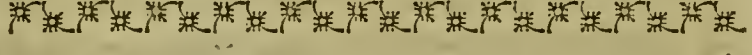

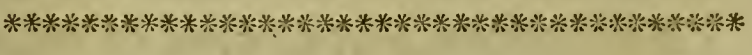
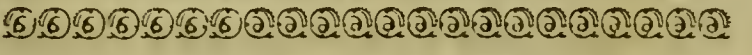
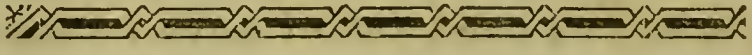

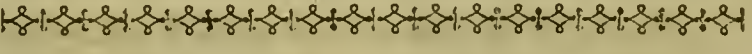
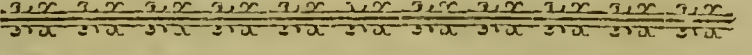

Pica Flowers.

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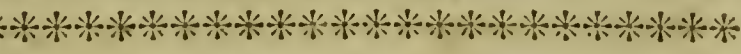

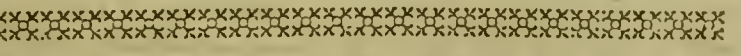
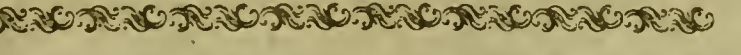


Small Pica Flowers.

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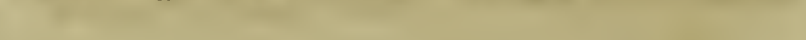
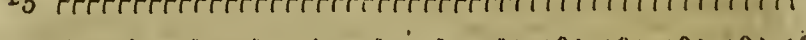
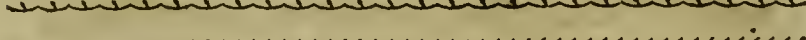
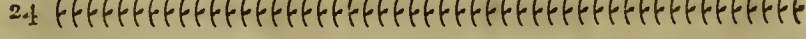
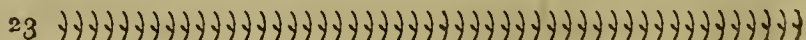
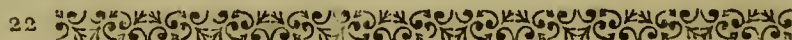
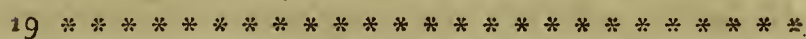
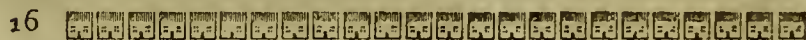
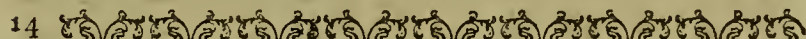
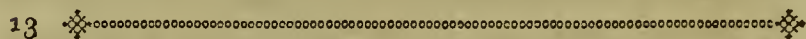
Small Pica Flowers.

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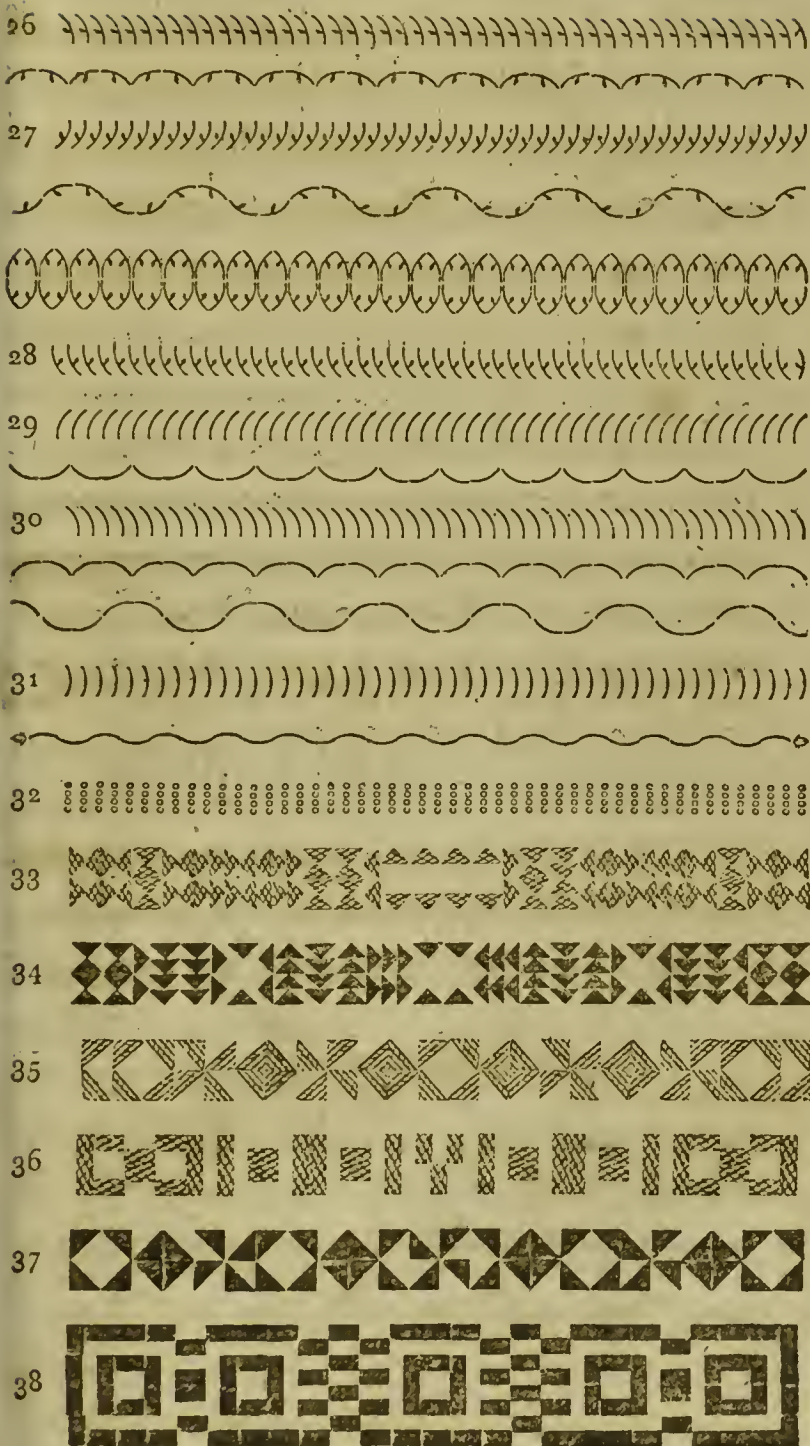
Long Primer Flowers.

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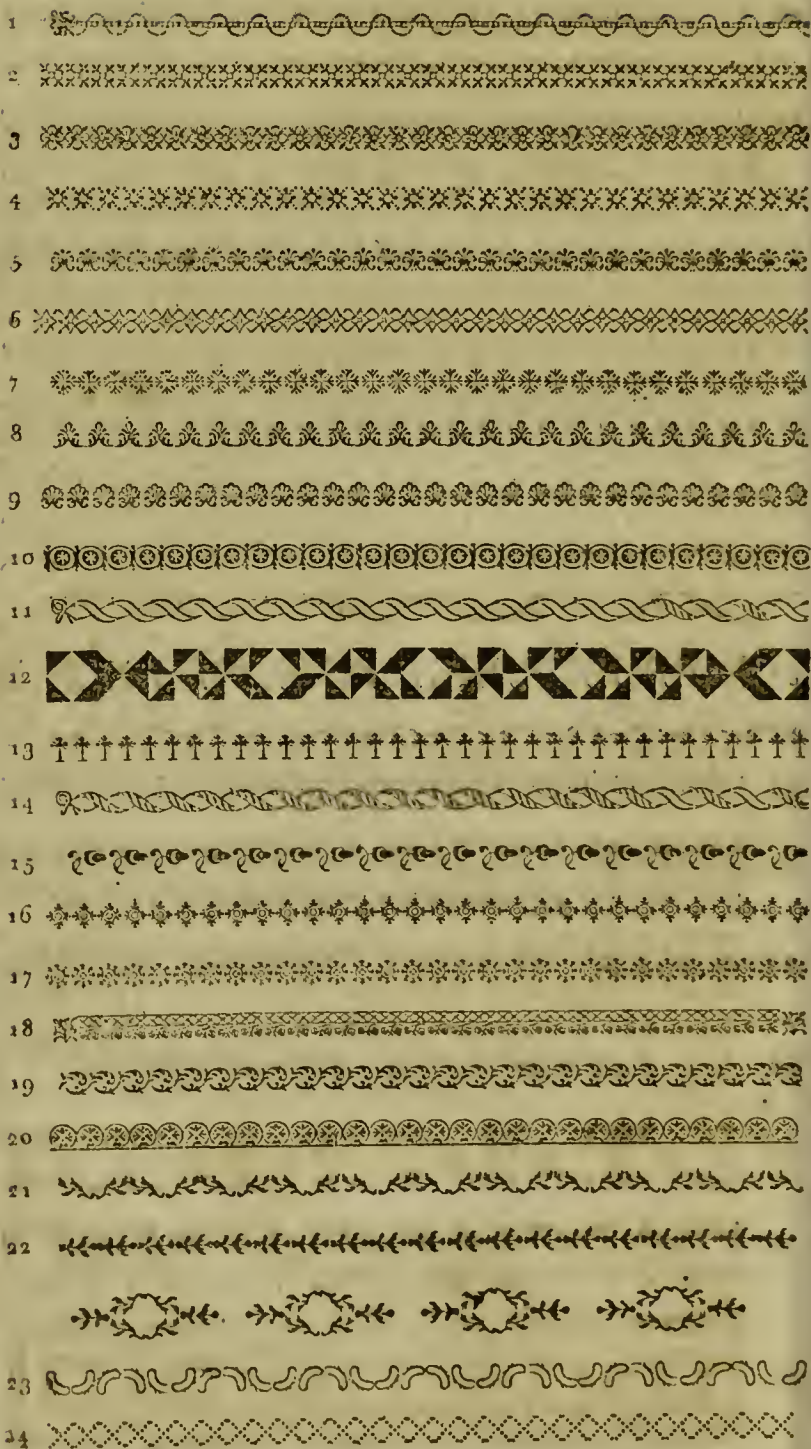
Long Primer Flowers.



Long Primer Flowers.



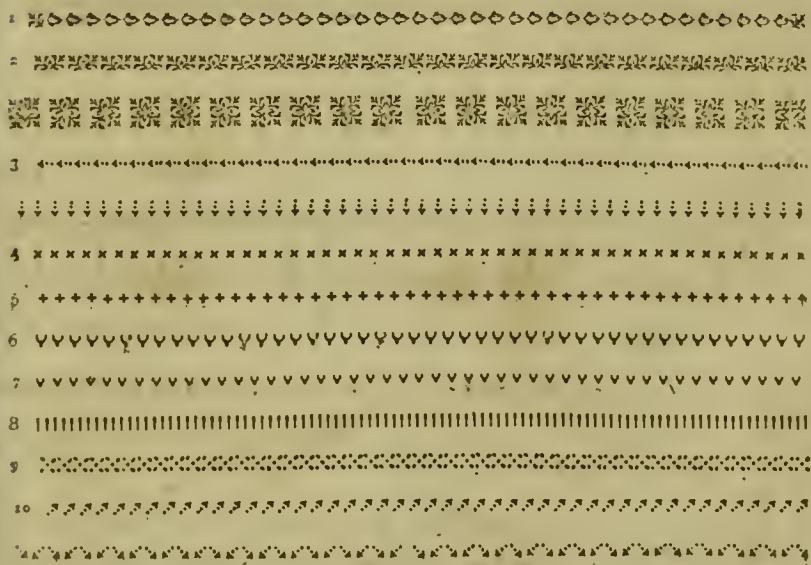
Brevier Flowers.

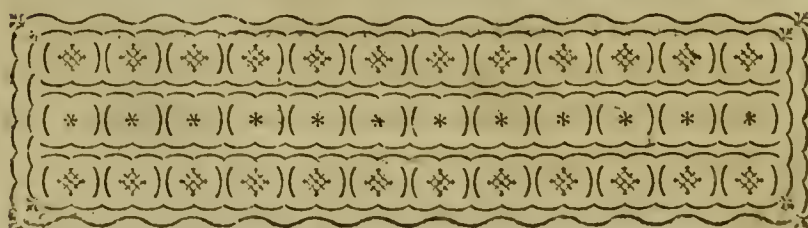
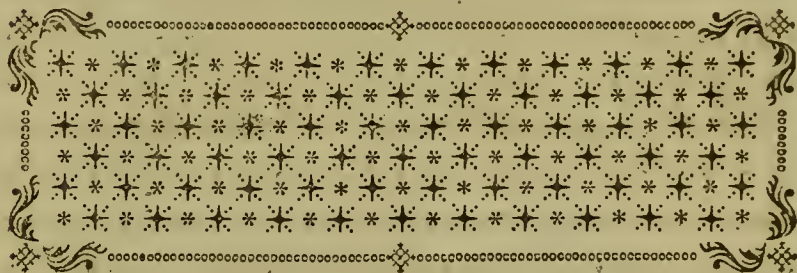


Nonpareil Flowers.



Pearl Flowers,







A P P E N D I X.

PRACTICAL DIRECTIONS

T O

P R E S S M E N.

Of Constructing and Putting up a Press.

THOUGH Mr. SMITH in his former Editions of the Printer's Grammar did not condescend to say any thing relative to the Pressman's Department, the Editor of this Edition, considering it as an important part of Printing, has introduced an Appendix selected from a work published some years since, containing instructions to unskilful Pressmen, which will be a mean of rendering this work more complete; particularly as it may fall into the hands of many whose situation and circumstances make it necessary for them to have a knowledge both of a Compositor's and Pressman's business.

The

The Printing-Press that a Pressman works at is a machine invented upon mature consideration of mechanic powers, deduced from geometric principles; and therefore a Pressman, endowed with a competency of the inventor's genius, will not only find great satisfaction in the contemplation of the harmonious design and formation of a Press; but, as often as any member or part of it is out of order, he will know how to remedy any deficiency in it. This alone will intitle him to be an understanding Pressman: But his care and serious industry in the manual performance of his task, must give him the reputation of a good and curious workman,

An understanding Pressman knows not only how to direct a Printer's joiner to set up and fasten a Press when it is made, but also how to give a strange joiner and smith instructions to make a Press, and all its parts, in a symmetrical proportion to any size, if in a strange place he shall have occasion to use it. It being not only a care incumbent upon him, but a curiosity he should assume to himself, to direct and see the joiner set and fasten it in a steady and practical position; we will suppose a strange joiner, and not a printer's joiner, who generally by their constant conversation in printer's work, do or ought to know as much of setting up a Press as the Pressman himself,

The joiner therefore having set together the frame, viz. the Cheeks, Feet, Cap, Head, Till, Winter, Hind-Posts, Ribs, Carriage, &c. the Pressman directs, and sees him perform as follows. Before the Head is
put

put into its place, the Pressman besmears the whole tenoned ends and tenons well with soap or grease, and also the Mortises the Head slides in, and so much of the Cheeks as the ends of the Head work against, that the Head may the easier work up and down.

He also, before the Carriage is laid on the Ribs, besmears the two edges of the Plank and the under side of the Coffin well with soap or grease; and the like he does by the inside of the Wooden Ribs, that they may slide the easier beside each other.

Now to return to the joiner. The Pressman, I say, directs and sees him place the Feet upon an Horizontal Level Floor, to erect the Cheeks perpendicularly upright, to place the Stays or Braces so as the Press may be kept in the most steady and stable position, as well to give a check to the force of the hardest Pull he makes, as to the hardest knock the bar shall make against the farther Cheek, if by chance it slip out of the Pressman's hand.

This consideration may direct him to place one Brace against the end of the Cap that hangs over the hither Cheek, and in a range parrallel with the fore and hind side of the Cap: for the more a Brace stands aslope to the two parallel sides, the less it resists a force offered to the end of them, viz. the hither end of the Cap, which is one main Stay to the whole Press.

If he places another Brace against the hinder corner of the farther end of the Cap, it will resist the Spring of the Bar, when it may slip out of the Pressman's hand.

And

And if he places two other Braces, one against the hither corner of the hind side of the Cap, and the other against the farther corner of the fore side of the Cap; the Press will be sufficiently Braced up; if the room will afford convenience to place the farther end of the Braces against it.

By convenience; is meant a firm solidity to place the end of the Braces against, be it either a stone-wall; brick-wall; or some principal post, or a girder, &c. that will not start or tremble at the force of a Pull.

The Braces ought to be straight, and of substance strong enough proportionable to their length: and if convenience will allow it to be fixed in such a position that they stand in the same straight line with the upper surface of the Cap, viz. that the farther end of the Brace neither dips lower or mounts higher than the upper side of the Cap. Neither ought the Brace, though thus placed, to stand aslope or askew, that is, make unequal angles with the side of the Cap it is fastened to, but it ought to stand square, and make right angles with the respective side of the Cap; because in those positions the Braces best resist the force of continued Pulls.

But though this be, by the rules of architecture, the strongest, firmest, and most concise method for Bracing up a Press, yet the room the Press is to stand in will not always admit of convenience to place the Braces thus: therefore the Pressman ought to consider the conveniences of the room, both for the places to fit the Braces to, and the positions to set the Braces

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in; placing his Braces as correspondent as he can to these rules.

If he doubts the crazy make of the Winter, he will cause two Battens of three or four inches broad, and a full inch thick, to be nailed close to the outer sides of the feet of the Press, which will both strengthen the Winter, and keep the lower part of the Cheeks from flying out, and also hinder the Press from working into a twisting position.

The Press being thus far fastened, the Carriage is laid on; and if the joiner performs his work well in making the Wood work, it will at first lie exactly horizontal; if not, it must be mended where it is amiss, before the Pressman can lay the Stone, and before the Stay of the Carriage can be fitted under the end of the Ribs.

Laying or Bedding the Stone.

We will suppose the wood Ribs to lie on the Winter exactly flat and horizontal, therefore the Pressman now Lays the Stone. If the Stone be all the way of an equal thickness between the Face and the bottom, he may Bed or Lay it upon so many large Sheets of brown paper as will raise the Face about a Brevier above the surface of the Coffin, and the Stone will do service.

Or he may Bed or Lay it on bran; which indeed is frequently done, as follows:

He takes a quantity of bran, and spreads it with the greatest Evenness and Regularity, so that it may raise

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the Stone about a Great Primer above the surface of the Coffin. But as accidents frequently happen from the above practice, most Printers, if the stone be thin, bed it with plaister of Paris, which, before it hardens, will of itself run into an horizontal position.

The plaister of Paris is tempered with fair water to a thin consistence; and such a quantity is put into the Coffin as may raise the Face of the Stone about a scabard higher than the surface of the Coffin.

The different matter the Stone is Laid on, is the reason why the Face is Laid of different heights above the surface of the Coffin: for by the force of a Pull about a dozen sheets of brown paper may be squeezed closer by a Brevier Body, which brings the Face of the Stone into the same level with the surface of the Coffin. And bran squeezes much more; but plaister of Paris, not at all.

When a Stone is laid on Bran, or on plaister of Paris, the Pressmen sling the Stone in two strong Cords; then bring it as nearly as they can into an horizontal position, and with great care and caution let it in such a manner into the Coffin, as that the whole bottom of the Stone touch the Bedding at once; lest by an uneven lowering of the Stone the evenness of the bedding be disturbed.

Having laid the Stone down, they drop some water about the middle of the Face of it, to try whether it lie truly horizontal, which they know by the standing of the water: but if it have a propensity to one side more
than

than another, the declivity is on that side, and the Stone must be new Laid.

Having laid it horizontally, they fill up the cavities with pieces of reglet.

Setting the Rounce.

The Rounce being well Set, does not only ease a Pressman in his labour, but contributes much to ridance in a train of work.

In the old-fashioned Presses, the Pressman finds often great trouble and loss of time in Setting the Rounce: because the Girts being nailed to the Carriage-board behind, and to the frame of the Coffin before, he cannot alter the position of the Rounce without unnailing and nailing the Girts again, both before and behind. Nay, and sometimes, though he thinks he has been very careful in Winding the Girts off or on the Barrel of the Rounce, as he finds occasion requires; yet, by straining either of the Girts too hard, or not hard enough; or by an accidental slip of either of the Girts, or by stirring the Rounce out of a set position, when he thinks he has Set the Rounce, he has it to do again. Besides, the Carriage-board, Frame of the Coffin, and the Rounce-barrel, all suffer damage by often drawing out and driving in of nails.

But in the new-fashioned Presses all these inconveniences are avoided; for the Pressman, without nailing or unnailing, Sets the Rounce to what position he will, only by lifting up the iron Clicker that stops the wheel: For then Winding off so much Girt, and

Winding up so much Girt at the opposite end of the Carriage, his Rounce is set.

He Sets the Rounce to such a position, that when the fore-end of the Tympan will just lie down and rise free, without touching the fore-edge of the Platin, a line drawn or imagined from the axis of the Handle of the Rounce, to a perpendicular or Plumb-line, let fall from the axis of the Spindle of the Rounce, shall make an angle of about 45 degrees; which is half the elevation between an horizontal line, or line of level, and a perpendicular, or plumb-line.

Hanging the Platin.

When the Pressman Hangs the Platin, he lays a Form upon the Press, and about a quire of paper doubled upon it, (this quire of paper thus doubled is called the Cards) then lays the Platin upon the Cards, and so Runs the Carriage and Platin in, till the middle of the Platin lie just under the Toe of the Spindle: then he puts the Pan of the Platin in its place, and in part justifies the Head, and unscrews the Hose-screws, 'till the squares at the ends of the Hose come down to about a quarter of an inch of the square of the socket they are fitted into, in the ends of the Garter; and when the Toe of the Spindle is fitted into the Nut in the Pan of the Platin, he examines, by straining a packthread against the two fore-sides of the Checks of the Press, whether the fore-edge of the Platin is set in a parallel range with the fore-sides of the Checks: if it be not, he twists the ends till the
edge

edge of the Plattin stands parallel with the packthread, and consequently with the Cheeks.

Then with the Bar he pulls the Spindle hard down upon the Plattin, and sets the edges of a Paper-board between the Bar and the further Cheek of the Press, to keep the Bar from starting back.

And having provided cord, he makes a noose on one end, and puts it over one of the Hooks of the Plattin, lashing the cord also upon the furthestmost Notch of the Hose hook, and again upon the Plattin hook: So that there are now three lashes of the cord upon the Plattin hook, and upon the furthestmost Notch of the Hose hook. Wherefore he fastens his fourth lashing of cord now upon the second Notch, viz. the middlemost Notch of the Hose hook, reiterating these lashes on the middlemost Notch and Plattin hook also three times. And thus in like manner he fastens also three lashes upon the third and last Notch of the Hose hook and also of the Plattin hook; observing to draw every lashing of an equal strength.

Then he begins to wind about these lashings to draw them close together: He begins at the bottom of the lashings, that is, close above the Plattin hook, and draws his cords very tight and hard, and close above one another, till he has whipt so near the top of the lashings, viz. near the Hose hooks, that he finds the lashing (which now spread wide asunder because the Notches of the Hose hooks stand far asunder) will yield no longer to his whipping and pulling: So that now he fastens his cord with two or three hard knots.

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In like manner he begins at the opposite diagonal corner of the Platin, and lashes and whips that; and also the two other corners of the Platin, as he did the first; carefully observing to draw all his lashings and whippings of an equal strength, lest any corner of the Platin either mount or dip.

If he finds he strained the cord not hard enough; or (when he is in his train of work) that the Platin-cords with long using work loose; or that the Toe of the Spindle and the Nut it works in, have worn one another; he by turning the Screws at the upper ends of the Hose, draws up the Nut of the Platin closer to the Toe of the Spindle, and by consequence strains the Platin-cords tighter up; which is also a great convenience in these new-fashioned Presses. For any of these aforesaid accidents the Pressman that works at the old Presses must new Hang his Platin; when in these new Presses he only turns about a Screw.

Justifying the Head.

Justifying the Head is to put into the mortises in the Cheeks between the upper sides of the tenons of the Head, and the upper sides of the mortises in the Cheeks, an equal and convenient thickness of square pieces of felt, pasteboards, or scabbards (some or all of them), that when the Pressman Pulls, the tenons of the Head shall have an equal horizontal level check.

In Justifying the Head, the Pull is to be made longer or shorter.

If the Pressman be tall and strong, and his work be Light (that is, a small Form and great Letter, which needs not so strong a Pull as a large Form and small Letter), he covets to have a Short pull; that is, that the Spindle shall give an Impression by that time the Bar comes but about half way to the hither Check (in Printers language, Down).

But if the Pressman be low, and not very strong, he will require a Longer Pull, especially if the work be Heavy, viz. a large Form and small Letter: because the height of the Bar is generally made to lie at the command of a reasonably tall man, and therefore a low man cannot pull the handle of the Bar at so great a force at arm's end as a tall man; but will require the swinging of his whole body backwards to add force to the Pull: so that if the Pull be not Longer, he cannot fall enough backwards to get the Handle of the Bar within his command and force. And therefore Heavy Work with a low man requires a long and Soaking Pull.

A long or a Soaking Pull is when the Form feels the force of the Spindle by degrees, till the Bar comes almost to the hither Check of the Press: and this is also called a Soft Pull; because it comes soft, and soakingly and easily down: and for the contrary reason the Short Pull is called an Hard Pull, because it is suddenly performed.

That which makes a Hard Pull, is putting into the mortises in the Checks solid blocks of wood, which will scarce yield by the strength of a Pull: and that
which

which causes a Soft Pull is putting in pieces of felt or pasteboard; which being soft will yield, and retain their spring for a considerable time, yet will at length grow hard with working, and then the Pull grows Longer; which the Pressman mends, by putting another felt or pasteboard into each mortise.

The Head cannot be conveniently and well Justified soon after the laying of the Stone, if it be Laid on bran; because, though the force of the Spindle will at the immediate time of the Pull squeeze the bran in the Coffin close; yet so soon as the force of the Spindle is off the bran, all its dry parts, by their several irregular positions, will, like so many springs, at the same moment of time endeavour to recover their natural tendency, and heave the Stone upwards again: so that generally, for a day or two working, the Stone will not lie solid, though at length through the often and constant squeezing the bran, it will. But if the Stone be Laid on brown paper, or plaister of Paris, it quickly finds a solid foundation.

When the Pressman Justifies the Head, he unscrews the Female Screws of the Head Screws, that the weight of the Head may draw it down, to make room to put the Justifiers into the mortises in the Cheeks; and when he has put in so many as he thinks convenient, he Screws up the Head again as hard as he can. He then lays the Cards on the Form on the Press, and runs in the Carriage under the Platten, and Pulls hard upon it, while his Companion Screws up the Head as hard and tight as he can, that the Carriage,

riage, Tympan, &c. may run the freer under the Plattin.

The Ribs, the Tympan Joints, the Frisket Joints, the Garters, both ends of the Rounce Spindle, the Nut and Spindle, and the Toe of the Spindle, are all to be well oiled; that they may perform their several offices the easier, lighter and nimbler, both Over and Under hand.

Making Register, and Making Ready a Form.

A Curious Pressman will take care that, against the Compositor brings a Form to the Press, his Press stone be wiped very clean; for if any (though small) hard particle lie on it, the Letter that lies on that matter will, with Pulling, quickly Rise, and not only have a stronger impression than the rest of the Form, but bear the force of the Plattin off the Letters adjacent to it. He also carefully examines that the backside of the Form is clean, before he goes about to make Register, or otherwise make ready his form.

Making Register is to Quoin up a Form, and otherwise alter Whites (if need be) between the Crosses and Pages; so as that when a second Form of the same Volume, Measure and Whites, is placed in the same position, all the sides of each Page shall fall exactly upon those of the first Form.

The first process a Pressman makes towards this operation, is the chusing and placing of his Points: for

to large paper he chuses Short Shank'd Points, and to small paper Long Shank'd Points, and proportionable to intermediate sizes of paper: for his Points ought to be so placed, that, when he is in his train of work, they prick the Point holes within the grasp of the hollow between his hand, thumb, and fore-finger; because, when he shall work the Reiteration, he may the better manage and command the sheet he lays on the Tympan and Points.

Nor will he place his Points too near the edge of the Paper; because, when he works the Reiteration, he would be forced to carry his furthest Point hole the further from him, which in a long train of work loses time: for the Laying Sheets quickly on their Point holes adds much to dispatch. So also the less distance between the further and hither Point hole makes more riddance than if they are far distant; because he must draw his body so much the further back, to place that Hole on its Point. Therefore he places the hither Point further into the paper than the further Point, if it be Folio, Quarto or Octavo; but to Twelves, equally distant from both edges of the paper.

By placing the Points unequally from the edges of the paper, as in Folios, Quartos and Octavos (as aforesaid), he also secures himself the more from a Turn'd Heap when he works the Reiteration; because without very much altering the Quoins he will not be able to make Register: and Pressmen (especially if they work upon the same sort of work) seldom or never

remove

remove the Quoins on the further side the Carriage, nor on the right hand end of the Carriage, but let them lie as gauges for the next Form: for thrusting the Chase close against these Quoins, the Register is almost (if not quite) made; the Compositor having before, according to his task, chosen Chases exactly of an equal size, and made equal Whites between the Crosses, &c.

Having chosen his Points, he places them so that they may both stand in a strait line parallel with the top and bottom sides of the Tympan; to know which, he strains a packthread across the whole Tympan, laying it at once upon the middle of the Heads of both the Point-Screws (for we will suppose the joiner hath made the mortises into which the Point Screws are let, parallel with both the ends of the Tympan); and if both the Points stand in that straight line, they are parallel; if not, he moves one or both of them upwards or downwards till they do, and then Screws them fast.

Then he lays the Tympan down upon the Form, holding the Frisket-end of it in his left-hand, about an inch or an inch and a half above the Face of the letter, and sinks his body downwards till he can see between the Form and Tympan; and with the ball of the middle finger of his right-hand presses gently upon the Tympan over the Point-ends of each Point successively, to see if the Points fall in or near the middle of the Grooves in the Short-Cross. If they fall exactly in the middle of those Grooves, the Form lies right

between the middle of both the ends: if they fall not exactly in the middle, he moves the Form between the ends of the Carriage till they do, and then Quoins up both ends of the Chase.

Now laying the Tympan flat down upon the Form, he places the Blankets in it: then putting in the inner Tympan, he fastens it with the Hooks and Button for that purpose, which serve to keep it from springing upwards.

Then he folds a sheet of the paper he is to work, in Quarto, and lays the long crease of it upon the middle of the Long-Cross; and the short crease over the middle of the Grooves of the Short-Cross, if it lie in the middle of the Form (for in Twelves it does not, but then he folds the paper accordingly). Now, wetting his Tympan, he turns it down upon the paper, and Running in the Carriage, Pulls that sheet, which, with the force of the Pull now the Tympan is wet, will stick to the Tympan; and turning up the Tympan again, he examines how evenly the sheet was laid: for if it was laid even on the Form, the margin about the outsides of all the outer Pages will be equal; but if the sheet be not laid even, he lifts it up side by side till he have loosened it from the Tympan, and gradually removes it till it be laid even: and then Pulls again upon it to fasten it to the Tympan. This sheet is called the Tympan-sheet.

Then he lays another sheet even upon the Tympan-sheet, for a register sheet, and a waste sheet over that, to keep it clean from any filth the Face of the letter
may

may have imprinted upon it, and Pulls these two sheets. Then he runs out the Carriage, lifts up the Tympan, and takes off the two sheets, laying the waste sheet by; but turns the other side of the Register-Sheet the proper way his volume requires, viz. end-ways. Now laying the Point-holes in the Register-Sheet over the Points, he lays his waste sheet on again, Runs in the Carriage, and Pulls upon that the second side of the Register-Sheet, to try how well the impression of the sides of all the Pages agrees, and lies upon the impression in the first Pull'd side. If he finds they agree perfectly well, Register is made. But if the impression of the last Pulled side of the Register-Sheet stand not even with the impression of the first Pulled side, either the whole length of the sheet or part, he observes how much it stands uneven; then he loosens the Quoin or Quoins on the farther side of the Carriage, and removes them backwards till they stand the requisite distance off the sides of their respective corners; then knocks up one or both the opposite Quoins, till he have removed the Chase, and the Chase by consequence has forced the opened Quoin or Quoins close against their corners. Or if the impression of the last Pulled Side stand within the impression of the first Pulled Side, he observes how much also; and Loosening the hither Quoin or Quoins, and Knocking up the opposite as before, makes Register for the sides of the sheet.

He next observes how the Register of the Head and Foot agrees; and if he finds it agrees on both sides
the

the short Cross, he has good Register; supposing the Compositor has performed his office, viz. made all his Pages of an equal length, &c.

If the impression of the last Pulled Sheet lie without the impression of the first Pulled Sheet, towards the upper or lower end of the Tympan, he opens the Quoins at the respective end, and Knocks-up the opposite till he has made Register: to try which, he Pulls another clean Register-Sheet as before. And if he finds Register agree on all the sides of the Form, the task is performed: if not, he mends as aforesaid till it does.

But it sometimes happens that the Compositor has not made an exact equal White between all the sides of the Crosses: in this case, altering the Quoins will not make good Register; wherefore the Pressman observes which side has too much or too little White; and, unlocking the Form, takes out or puts in such a number of Scabbards as he thinks will make good Register: which he tries by Pulling a sheet, and, if need be, mending as before, till he has Pulled a sheet with good Register.

Although the Pressman has made Register, yet he must further Make Ready the Form before he can go to work upon it. Under this phrase of Making Ready the Form are comprehended many considerations, leading to several various operations; for first, the Frisket must be Cut: to perform which, the Pressman fits the Match Joints of the Frisket into the Match Joints of the Tympan, and pins them in with the
Frisket

Frisket Pins; and having Beaten the Form, turns down the Frisket and Tympan on the Form. He now rubs the Blankets to soften them, lays them smooth and even in the Outer Tympan, Pins the Inner Tympan in upon them, and Pulls as before upon the bare Frisket.

Then he runs out the Carriage, takes up the Tympan and Frisket together off the Form, and lays them on the Gallows; then draws the Frisket Pins out again, and takes off the Frisket; and laying it flat on a Paper-board, with the point of a sharp knife cuts through the Frisket about all the sides of each Page, allowing to each Page he thus cuts out of the Frisket about a Nonpareil Margin on all the sides of the cut Pages: then he pins his Frisket again on the Tympan, as before.

2dly, He takes care that the Tympan be well Wet; which he does by squeezing water out of a Sponge on the backside of it, till it be rendered sufficiently soft and pliable.

3dly, That the Form be properly Locked up.

4thly, That no Letters or Spaces lie in the White lines of the Form; which may happen if the Compositor have made any Corrections since the Form was laid on the Press.

5thly, If any wood Letters or other Cuts be in the Form, that they be exactly Letter high: if not, (for it seldom happens they are) he must make them so. If they are too Low, he Under-lays them; but examines first how much they are too Low, by laying one or
more

more cards or scabbards upon the face of the Wood Cut, and feeling with the fingers of his right hand if the intended Under-lay be exactly even with the Face of the Letter. If it be not, he tries thicker or thinner Under-lays till he has made it on a level.

Having evened his Under-lay, he Unlocks the Quarter it is in, takes the Wood Cut out of the Form, and fitting a scabbard or card, or what he judges requisite, to the bottom of his Wood Cut, places it thus raised in the Form. But yet he trusts not to his judgment altogether for the thickness of the Under-lay: but Locking up the Form again, Pulls the Cards upon it to sink it as low as it will go, and Beats and Pulls a sheet to see how it pleases him, thus adding or taking away till it be brought to its proper height.

If the Wood Cut be too high, he causes a joiner to plane off some at the bottom.

6th, If a White Page or Pages happen in a Form, and he uses a New made Frisket, then he does not Cut out that Page; but if he works with an Old Frisket, and that Page is already cut out, he pastes on a Paper to cover the White page in the Form, that it print not black.

As the White Pages do not stand in general so high as the other Pages of the Form, those adjacent to the White page will come off harder than any other in the Form; to prevent which, the Pressman either Under-lays the low Page as he does Wood Cuts, or fits a Bearer on the Frisket.

The Bearer is a Reglet of a convenient thickness : and this convenient thickness the Pressman regulates in the same manner as the Underlays for Wood Cuts ; with this difference, that as then he made his Wood Cut exactly Letter high, so now he makes his Bearer and the Furniture his Bearer rests on Letter high : wherefore he pastes one side of his Bearer, and lays it as he would have it on the Furniture, with the pasted side upwards ; and laying his Frisket and Tympan down upon the Form, with his fingers presses on the outside of the Inner Tympan, Frisket and all, upon the place where the Bearer lies ; so that with the paste the Bearer sticks to the side of the Frisket.

7th. He examines whether the Frisket Bites : that is, whether it keep off the impression from any part of the Pages : if it do, he cuts away so much, and about a Nonpareil more, off the Frisket where it Bites.

8th. He examines if the Beards of the Letter print at the Feet of the Pages : if they do, he considers whether the too short or too far Running in of the Carriage causes it ; or whether it be only the Beard of a short Page that prints ; if the last be the cause of it, he remedies it with an Under-layer.

If the Carriage be Run in too short, and the Feet of the Pages stand towards the Platin, the Hind-side of the Platin will press strong upon the Feet of those Pages : and if the Carriage be Run in too far, the Feet of the Pages that stand towards the hinder Rail of the Tympan will most feel the force of the Platin ; and according to a greater or less proportion of that

force, and to the softness or yielding of the paper, Tympan, and Blankets, and all other Springs in the Press, the Feet of the Pages and Beard of the Letter will more or less print Hard.

Wherefore in this case he Runs the Carriage under the Platin, till the further edge of the Platin just cover the Feet of those Pages, and with a piece of chalk makes a stroke over the Board of the hither side of the Carriage behind, and the upper side of the Rail of the Ribs: then he runs in the Carriage again, till the fore-side of the Platin just cover the Feet of the Pages next the Hind Rail of the Tympan, and makes another mark with chalk on the Rail of the Ribs, to join with the mark he first made on the Board of the Carriage. He now Runs out the Carriage, and lays the Tympan down on the Form; then Runs in the Carriage again till he joins the mark or line he made first on the Carriage-board and Rail of the Ribs, and makes a mark with chalk on the further Rail of the Tympan to range with the fore-side of the Platin. This mark on the Tympan shows him how far he must Run the Carriage in against the fore-edge of the Platin, for the First Pull. Then he Runs in the Carriage farther, till he joins the same mark or line on the Carriage-board to the second mark he made on the Rail of the Ribs, and makes another on the further Rail of the Tympan to range with the fore-side of the Platin, for the mark to which he is to Run the Carriage in against the fore-edge of the Platin, for his Second Pull.

9th. He examines if the Catch of the Bar will hold it when the Spindle makes a small spring, viz. when the Bar flies but a little way back from the pressure of the Form: if it will not, he knocks up the Catch higher, and then Screws the Screw on the Shank, and consequently the Catch close and firm against the Cheek of the Press.

But if the Catch stand too high, so that it will not without a great Spring (viz. when the Bar is Pulled hard from the further Cheek) fly up; he then knocks upon the top of it, to sink it lower; and, when it is well fitted, screws it up again as before.

If the Catch stand too low, it will not hold the Bar, but will Come down when he is in his train of work: for if, as it often happens, he lets the Bar fly back harder than ordinary, or if it slip out of his hand, it will knock hard against the Cheek, and spring back again.

If the Catch of the Bar stand but a little too high, the violence of the Bar's flying back to make it stick on the Catch, will soon loosen the square of the Bar in the Eye of the Spindle; and indeed subject the whole Press to an unstable condition.

10th. He considers whether the Stay of the Frisket stands either too forward or too backward. The Stay may stand too forward, though when it is leisurely turned up it stays the Frisket: because, when the Pressman is proceeding in his work, though he generally throws the Frisket quick up with an accustomed,

and, as he intends, equal strength; yet if his guess at strength in throwing it up varies, and it comes (though but a little) harder up, the Batten fastened on the Cap, and the perpendicular Batten fastened to the aforesaid Batten, will by their shaking cause a spring, which will throw the Frisket back again upon the Tympan: nay, though, as sometimes it happens, a solid wall serves to do the office of a Stay for the Frisket, yet with a little too hard throwing it up, the Frisket itself will so shake and tremble (its frame being made of iron) from end to end, that before it recovers rest, its own motion will by the quick running of a spring throw it back again.

If the Stay stand too backward, then, after he has given the Frisket a touch to bring it down, it will be too long before it come down, and retard the progress of the work.

Therefore he places the Stay so, that the Frisket may stand a little beyond a perpendicular backwards, that with a near-guess'd strength in the tossing it up it may just stand, and not come back; for then with a small touch behind, it will again quickly come down upon the Tympan.

11th. He fits the Gallows, so that the Tympan may stand as much towards an upright as he can: because it is the sooner let down upon the Form, and lifted up again. But yet he will not place it so upright, but that the white sheets of paper he lays on it may lie secure from sliding downwards: and for Reiteration sheets, their lying upon the Points secures them.

12th. He considers the situation of the Foot-step, and that he places so as may best suit with his own stature: for a tall man may allow the Foot-step to stand farther off and lower than a short one, because his legs reach farther under the Carriage, and he can tread hard to add strength to his pull; when a short man must strain his legs to feel the foot-step, and consequently diminish the force of his pull.

13th. Few Pressmen will set the range of the Paper Bank to stand at right angles with the Plank of the Carriage: but they draw the further end of the Paper Bank so as that the hither side may make an angle of about 75 degrees (more or less) with the hither side of the Carriage. The reason is, if the hither side of the Paper Bank stand at right angles with the hither side of the Carriage, he must carry his hand farther when he lays out Sheets, which would occasion delay: besides, his companion has a nearer access to it, to look over the Heap; which he frequently does, to see the colour of the work.

14th. The Pressman brings his Heap, and sets it on the hither end of the Paper Bank as near the Tympan as he can, yet not to touch it, and places an end of the Heap towards him. He then takes the uppermost or outside sheet, and lays it on the Paper-board; and taking three, or four, or five quires off his Heap in both his hands, he lifts them a little above his head, and claps them down as hard as he can upon the rest of the Heap, to loosen the sheets that with pressing stick close together: and not finding them loose enough,
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he shakes them long-ways and side-ways, to and fro, till he finds he has pretty well loosened or hollowed the heap.

Then with the nail of his right hand thumb, he draws or slides forward the upper sheet, and two or three more commonly follow gradually with it, over the hither edge of the Heap, to prepare those sheets ready for laying on the Tympan.

15th. He considers if the Face of the Tympan be moist enough for the Tympan sheet to stick to; for though he wet the back side of it before to supple it, yet if the Tympan be strong, the water will not soak quite through to moisten the Face: he then takes a sponge of clean water, and makes it sufficiently moist to secure the Tympan sheet.

He now takes a sheet of paper off the Heap for a Tympan sheet, folds it into four quarters, and lays the creases of the sheet exactly upon the middle of the Short and Long Crosses, if the Form allows them both to be in their respective middles of the Chase; if not, he lays the creases exactly against the notches in the Chase that are made for them respectively: and if his Frisket be blacked with former work, he lays a sheet of waste paper upon the creased sheet: then lays the Tympan down on the Form, Pulls on these two sheets, takes up his Tympan again, and lays by the waste sheet; but the creased sheet he lays on the Tympan. But first he presses the Tympan downwards, from under the shank of each Point successively; puts the two opposite sides of the sheet under the Shanks of the

Points, and the Holes of the Points pricked with Pulling, exactly under the bottom rivets of the Points: then taking a little paste, he fastens the corners of the sheet to the Tympan; but the bottom corner of that side the sheet that is next to him, he will tear away, that he may not catch it as he Takes off, and prevent expedition.

This sheet is called the Tympan sheet; and is only as a standing mark to lay all the other sheets exactly even upon, while he works the White Paper.

The Pressman now supposes he has Made Ready: yet to be certain, he will try his Register once more, lest some of the Quoins should have slipt: if his Register be not good, he mends it. But we will suppose it now good; wherefore he gently Knocks up all the Quoins in the corners, with an equal force, to fasten them.

Drawing the Tympan and Frisket.

Drawing the Tympan or Frisket is the covering and pasting on of vellum, forrels or parchment upon the frames. To each Tympan and Frisket is chosen a skin large enough to cover the frames.

These skins the Pressman rumples up together, and puts them into water to soak; and if he thinks they do not soak fast enough, he rubs them between his hands, as women wash cloaths, to supple them, that the water may soak the faster in. And being thoroughly soaked, he wrings the water out.

Then

Then having provided some paste made of fine wheaten flower, well boiled in water, he spreads the skin flat, and first pastes the under side of the Tympan; then lays it on the middle of the skin, and raising up each side successively, pastes the skin also from the inside the Tympan to the outer edges of the skin, and lays the Tympan down flat again: then he pastes all the other sides of the Tympan, and wraps the skin about the two long sides first, cutting the sides of the skin away so much, till he leaves only enough to reach almost quite through the under-sides of the Tympan again: Then drawing and straining the skin tighter, he drives in the points of nails about six inches distant from one another, to keep the skin from starting as it dries.

Having thus drawn the sides, he with the point of a penknife cuts square holes in the skin, just where the iron-joints fall, for the joints to fall into, and draws and strains the ends of the Tympan as he did the sides; wrapping the ends of the skin under the under-sides of the Tympan, and, where wood is, driving in the points of nails, as before. He then sets it by to dry; and, when dry, draws the nails.

As he drew this Tympan, so he draws the other, and the Frisket also: only, because he cannot drive in nails, (the Frisket being all made of iron) he doubles the skin over the sides of the Frisket; and being well pasted, as aforefaid, he sews the sides that lap over down upon the whole skin, to keep it from starting while it dries: then he pastes a sheet or two of paper

all

all over the inside of it, as well to strengthen as to thicken it. Friskets are more frequently made with paper.

Of Wetting Paper.

Paper is commonly Wet in a trough full of fair water. The Pressman places the dry Heap on the left hand of the trough, and a Paper-board with its breadth before him on his right, laying first a waste sheet of paper on the Paper-board, lest the board might soil or foul the first sheet of the Heap. Then he takes up the first token, and lays it in such a position that the backs of the quires lie towards his right hand, that he may the readier catch at the back of each quire with his right hand, when he is to wet it; and he lays that Token athwart, or somewhat crossing the rest of the Heap, that he may the easier know when he has Wet that Token.

Then taking the first quire of the Heap with the back of it in his right hand, and the edge of the quire in his left, he lays the quire down upon the waste sheet, so that the back of the quire lies upon the middle crease of the waste sheet, and consequently one half of the quire already laid even down upon one half of the waste sheet. If the paper be strong, he opens about half the quire, and turns it over dry upon the other half of the waste sheet; but if the paper be weak and spongy, he opens the whole quire, and lays that down dry.

Having laid down his dry laying, he takes another quire off the dry Heap, with the back of the quire in

his right hand, and the edge of the quire in his left, and closing his hand a little, that the quire may bend rather downwards between his hands, he dips the back of the quire into his left hand side of the trough of water; and discharging his left hand of the quire, draws it through the water with his right; but as the quire comes out he nimbly catches the edge of the quire again in his left hand, and brings it to the Heap; and by lifting up his left hand bears the under side of the quire off the dry paper, laid down before, lest the dry sheet should stick to the wet before he has placed the quire in an even position, and so perhaps wrinkle a sheet or two, or else put a dry sheet or two out of their even position.

But this drawing the quire through the water he performs either nimbly or slowly: if the paper be weak and spongy, he performs it quickly; if strong and stubborn, slowly.

To place this quire in an even position, he lays the back of it exactly upon the open crease of the former, and then lets the side of the quire in his left hand fall flat down upon the Heap; and discharging his right hand, brings it to the edge of the quire; and with the assistance of his left thumb (still in its first position) opens or divides either a third, or half, of the whole quire, according to the quality of the paper; and spreading the fingers of his right hand as much as he can through the length of the quire, turns over his opened division of it upon his right hand side of the Heap.

The reason why he spreads the fingers of his right hand as much as he can through the length of the quire, is, because the outside half sheet is wet, and consequently quickly limber; so that if the paper be weak, it would fall down before the rest of his opening, and double into wrinkles, which thus spreading his fingers prevents.

In the same manner he wets all the quires of his dry Heap.

But having wet his first Token, he doubles down a corner of the upper sheet of it on his right hand, so that the further corner may lie a little towards the left hand of the crease in the middle of the Heap, and so that the other corner may hang out on the hither side of the Heap about an inch and an half: this sheet is called the Token sheet, as being a mark for the Pressman, when he is at work, to know how many Tokens of that Heap are worked off.

Having wet the whole Heap, he lays a waste sheet of paper upon it, that the Paper board to be laid on spoil not the last sheet of the Heap: then three or four times takes up as much water as he can in the hollow of his hand, and throws it all over the waste sheet, that it may moisten and soak downwards into the unwet part of the last division of the quire.

The paper being thus wet, he takes up the whole Heap upon the Paper board, and sets it by in a convenient place of the room, and lays another Paper board upon it; and upon the middle of the Paper

board sets about half an hundred weight, and lets it stand by to press, commonly till next morning: for Pressmen generally wet their paper after they have left work at night.

Knocking up Balls.

Ball Leathers are either Pelts or Sheep-skins. If Pelts, such are chosen as have a strong grain, and the grease well worked out of them: they are either wet or dry before they come to the Pressman's use: if wet, he having before-hand provided a round board, of about nine inches and an half diameter, supposing the Ball stocks to be six inches diameter, lays the round board upon the whole Pelt, and cuts by the outside of the board so many round pieces as he can out of the Pelt, reserving two for his present use; hanging the rest up (commonly upon the Braces of the Press) to dry, that they may not stink or mould before he has occasion to use them. But if his Pelts are dry, he lays them to soak in chamber-lye.

If he works with leather, it is chosen with a strong and close grain: though by experience it is found that the neck piece, and indeed all along the back of the skin is best; but is commonly subject to be greasy, which gives the Pressman sometimes a great deal of trouble to make his Balls Take. He also lays the Ball Leathers in soak to supple them.

When they (either Pelts or Leathers) are well Soaked, he rubs them well with both his hands, and then twists and wrings them to get the water out again.

Having

Having Knocked up one Ball well, he Knocks up the other, as the first.

Balls are well Knocked up, when the wool is equally disperfed about the fides, and the middle fmoothly covered with the Leather; that is, not rifing in hillocks, or falling into dales; not having too much wool in them, for that will fubject them to foon hardening, and quickly be uneasy for the Preffman to work with; or too little, for that will make the Leather, as the wool fettles with working, foon flap, and wrap over itfelf into wrinkles; fo that he cannot fo well diftribute his Balls: but the Balls ought to be indifferently plump, to feel like an hard-ftuffed bed pillow, or a ftrong fponge a little moiftened with water.

Having Knocked up the Balls, and rubbed out the Ink, he tries if his Balls will Take; that is, he dabs the top of one three or four times lightly upon the hither part of the Ink block: if he finds the Ink fticks to it equally all about, and that fo much as has touched the Ink block is black, it Takes: but if fcarce any of the Leather is black, or that it be black and white in blotches, then the Balls do not Take: wherefore he confiders whether his Ball be too wet, or. elfe greafy, for each of thefe inconveniences will hinder the Taking of the Ball.

If it be too wet, he burns half a fheet or an whole fheet of wafte paper, and waves his Ball to and fro over the flame of it; but fo quick and cautiously that he neither fhinks the Leather nor dries it too much:

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in winter time, when a fire is at hand, he dries it gently by the fire.

If it be greasy, he takes oil and spreads it well over the whole Ball-leather; and then holding the Ball knife in his right hand, with its edge a little sloping downwards, that it cut not the Ball leather, and the handle of the Ball Stock in his left hand, turns the Ball about by its handle, pressing it hard against the sloped edge of the Ball knife, and at once drives the laid on oil and grease before the sloped edge of the Ball knife; but he keeps the handle of the Ball Stock, and consequently the whole Ball, constantly turning, that the whole circumference of the Ball may be Scraped; and as the Ball has performed a revolution against the sloped edge of the Ball knife, he draws gradually his left hand a little back, that the sloped edge of the Ball knife may by several spiral revolutions of the Ball, scrape up to the very top of the Ball, and carry before it the oil and grease thither; which he gathers up on the Blade of his Ball knife, and disposes of it as so much dirt and filth.

Rubbing out Ink.

Before the Pressman goes to work, he rubs out his Ink.

If the Ink has lain long on the Ink block since it was Rubbed out, the surface of it is generally dried and hardened into a film or skin, for which reason the Pressman carefully takes this film quite off with the Slice before he disturbs the body of the Ink; for should
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any, though ever so little of it, mingle with the Ink, when the Ball happens to take up that little particle of film, and delivers it again upon the Face of the Letter, it will be a Pick, and print black, and deface the work; and if it get between the Face of two or more Letters, or the hollows of them, it will obliterate all it covers: and if it be Pulled upon, and the Pressman not careful to overlook his work, it may run through the whole Heap.

Wherefore having carefully skinned off the film with the edge of the Slice, he scrapes his Slice clean with the Ball knife, lest some small parts of the film should yet stick to, or remain on the Slice; and then with the Slice brings the body of Ink into the middle of the plane of the Ink block, and searches the sides of it, by thrusting the edge of the Slice forwards along them and all the angles of the Ink block, and so scrapes off all as clean as he can, and gathers it to the whole mass; then with the Slice he turns it about half a score times over and over to mingle it well together, lest some part of it should be more consolidated than the rest.

He also considers what work he is going on; whether it be small or great Letter; if it be small or curious work, the Ink must be Strong: but if it be great Letter or flight work, he makes Soft Ink serve, or at least mingles but a little Hard Ink with it.

If the Ink be too Hard, as sometimes in frosty weather it will be, then, though his work be curious, yet he must Rub in a little Soft Ink, because it will not otherwise Distribute well upon the Balls; especially if
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the Leathers be too wet, or greasy: besides, it may, and many times does, pull and tear the grain off the skin; which not only spoils the balls, but fills the Form full of Picks.

Beating.

The Pressman imagines, or by his eye judges the length of his Form divided into four equal parts or rows; which four rows, for distinction sake, I shall number, from the left hand to the right, with first row, second row, third row, fourth row, just as an Octavo Form is exactly divided by four rows of Pages.

He places his left hand Ball at the hither end of the first row, so that though the Ball be round, yet the square encompassed within that round shall sufficiently cover so much of the square of the hither end of that row as it is well capable to cover; and his right hand Ball he sets upon the hither end of the third row: he sets his Balls close upon the Face of the Letter, with the Handles of the Ball-stocks a little bending towards him: but as he presses them upon the Face of the Letter, he raises them perpendicular; and lifting at once both the Balls lightly, just clear off the Face of the Letter, he removes them about the fifth part of the breadth of the Form towards the further side of the Form, and again sets them close down upon the Face of the Letter, with the handles of the Ball-stocks again bending a little towards him, as before; and as he presses them upon the Face of the Letter, raises them perpendicular, as before: thus in about four, or five, or six such motions,

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or rather removes of the Balls, according to the breadth of the Form, he Beats over the first and third rows. Thus Beating from the hither towards the further side, is in the Pressman's phrase called, Going up the Form.

The reason why he bends the Handles of the Ball-stocks a little towards him, is, that the Ball-leathers drag not upon the Face of the Letter; for then the edges of the hollows between the Lines or Words, or the edges of the cavities below the Face, would scrape Ink off the Balls to stop up or choak the Form. And the reason why, before he removes them, he raises the Handles of the Ball-stocks a little perpendicular, is, that the Balls may touch in their greatest capacity upon the Face of the Letter.

To Come down the Form, he skips his Balls both at once from the first and third row to the second and fourth row, and brings them down as he carried them up: only, as before he bent the Handles of the Ball-stocks a little towards him, so now he bends them a little from him, that the Ball-leathers (now Coming down) drag not, as mentioned above. Then in like manner he skips the Balls from the second and fourth row to the first and third row, and again Goes up the Form with the Balls, as he did before. He then again skips, as before, and Comes down the Form again with the Balls.

Having thus gone twice upwards and downwards with the Balls, the Form is sufficiently Beaten when the Face of the Letter takes well.

But if he Beats the first sheet of a fresh Form, or after a Form is Washed, or he makes a Proof, he Goes three, four, or five times upwards and downwards: lest the Face of the Letter should happen to be wet or moist, and consequently unapt to take Ink, without reiterated Beatings.

Pulling.

Under the general notion of Pulling and Beating are comprised all the operations that are necessary for a course of work as performed by the Puller and the Beater; for though the Puller lays on Sheets, lays down the Frisket, lays down the Tympan and Frisket, Runs in the Carriage, Runs out the Carriage, takes up the Tympan, takes up the Frisket, Picks the Form, takes off the Sheet, and lays it on the Heap, yet all these operations are in general mingled and lost in the name of Pulling; and as in Pulling, so in Beating; for though the Beater rubs out his Ink, Slices it up, Distributes the Balls, peruses the Heap, &c. yet all these operations are lost in the general name of Beating.

To take a sheet off the Heap, he places his body almost straight before the hither side of the Tympan: but he nimbly twists the upper part of his body a little backwards towards the Heap, the better to see he takes but one sheet off, which he loosens from the rest of the Heap by drawing the back-side of the nail of his right thumb nimbly over almost the whole length of the Heap, and receiving the hither end of
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the sheet with his left hand fingers and thumb, catches with his right hand about two inches within the further edge of the sheet near the upper corner, and about the length of his thumb below the hither edge of the sheet, and brings it nimbly to the Tympan; and, at the same time, twists his body again before the Tympan, only a very little moving his right foot from its first station forwards under the Carriage Plank; and as the sheet is coming to the Tympan, we suppose now he works on White Paper, he nimbly disposes the fingers of his right hand under the further edge of the sheet near the upper corner; and having the sheet thus in both his hands, lays the further side and two extreme corners of the sheet down even upon the further side and extreme further corners of the Tympan-sheet; but he is careful that the upper corner of the sheet be first laid even upon the upper corner of the Tympan-sheet, that he may the sooner disengage his right hand. If, however, by a quick glance of his eye, he perceive the sides of the sheet lie uneven upon the Tympan-sheet, with his left hand at the bottom corner of the sheet he either draws it backwards, or pulls it forwards, as the sheet may lie higher or lower on the hither corners of the Tympan-sheet, while his right hand, being disengaged, is removed to the back-side the Ear of the Frisket, and with it gives it a light touch to double it down upon the Tympan. By this time his left hand is also disengaged, and slipst to the hither under corner of the Frisket, to receive it, that it fall neither too hard nor too quick down upon the Tympan; for hard falling may shake the loose sheet on the Tympan out of its place;

and so may the quick pressure of the air between the Tympan and Frisket, after the sheet is well laid; and while his left hand receives the Frisket, his right is disengaged from the Ear of the Frisket, and removed to the middle of the back-side the Tympan; which he grasps between the balls of his fingers and thumb, to lift it off the Gallows, and doubles it and the Frisket together on the Form. And while the Tympan is falling, he slips his left hand fingers from under the Frisket to the hither outer corner of it, as well to keep the sheet close to the Tympan in its position, as to prevent the lower side of the Frisket from catching against any part of the Furniture, Quoins, Chaise, or the corners that may stand higher than their common plain.

Then nimbly slipping his left hand, he with it grasps the Rounce, and with a moderate strength nimbly gives its Winch about one turn round; but to regulate his Running in, he first makes a mark on the further rail of the Tympan, to which mark he Runs the Carriage in, till he brings the mark in a range with the fore edge of the Plattin; and as it is running in, skips his hand to within an inch or two of the end of the Bar, and then gently leans his body back, that his arm, as he Pulls the Bar towards him, may keep a straight posture; because in a Pull it has then the greatest strength. He now puts his right foot upon the Foot-step, while his left hand holds fast by the Rounce; as well to rest on the Foot-step and Rounce, as to enable his body to make a stronger Pull; which will prove Longer

ger or Shorter, according to the strength put to it, and also the Hard or Soft Justifying of the Head.

Then disengaging his right hand again from the Handle of the Bar, he slips it to the Bow of the Bar, before the handle fly quite back to the Cheek of the Press: for should the Bar by its forcible spring knock hard against the Cheek of the Press, it might not only shake some of its parts out of order, but subject the whole machine to an unstable position: besides, the further the Bar flies back, the more he hinders dispatch in recovering it again. But yet he must let the Bar fly so far back as that the Tympan may just rise clear of the Platin; lest when he Runs in his Second Pull, the Face of the Platin rub upon the Tympan, and force the sheet upon the Face of the Letter, which sometimes Slurs, and sometimes Doubles it, by which the sheet is destroyed.

Having Pulled the First Pull, and having the Rounce still in his left hand, he turns the Rounce about again, till the Carriage runs in so far as that the second mark on the rail of the Tympan comes into a range with the hither edge of the Platin, as before the first mark did; and then Pulls his second Pull, as he did his first; and slips his right hand again off the Handle of the Bar to the Bow, guides the Bar up to its Catch leisurely, that coming now near the Cheek it knock not against it: and just as he has Pulled his Second Pull, he gives a pretty quick and strong pressure upon the Rounce, to turn it back, and run the Carriage out again: and so soon as he has given that one pressure, he disengages his
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his left hand from the Rounce, and claps the fingers of it under the middle of the Tympan, and on the Ear of the Frisket : and while this is doing, he removes his right hand to the now upper, but immediately it will be the under side of the Tympan Rail, within four or five inches of the upper end of it, to receive the Tympan, as it is lifted up off the Form by his left hand : and having thus received it, he lets it descend gently on the Gallows. As it is descending, he slips his left hand fingers under the hither lower corner of the Frisket, and gives the Frisket a tofs up ; while by this time his right hand, being disengaged from the Tympan, is ready to catch the Frisket by the Ear, and convey it quick and gently to its Stay : and while the Frisket is going up, he slips the end of the middle finger of his left hand, or sometimes the ends of his two middle fingers, with their balls upwards, under the hither lower corner of the Pulled off Sheet ; and at the instant he has got them under, he nimbly bows his Joints upwards, to throw up the corner of the sheet, to make it rise a little, that he may catch about two inches of it between the balls of his thumb and fore finger. And having the whole sheet by this corner a little upwards, he at the same time lifts it off the Points, and draws it somewhat towards him ; and as it comes, catches it near the upper corner of the same side of the sheet, between the foremost joints of his fingers and ball of the thumb of his right hand ; and, nimbly twisting about his body towards the Paper bank, carries the sheet over the Heap of White paper to a Paper board, which before he placed beyond that Heap on his

his right hand, and lays it down upon a waste sheet laid for that purpose on that Paper board; but while it is coming over the White paper Heap, though he have the sheet between both his fore fingers and thumbs, yet he holds the sheet so loosely, that it may move between them as on two centers, as his body twists about from the side of the Tympan towards the side of the Paper bank.

Thus, you see, both the Pressman's hands at the same time alternately engaged in different operations: for while his right hand is employed in one action, his left is busy about another; and these exercises are so suddenly varied, that they seem to slide into one another's position; beginning when the former is but half performed.

Having thus Pulled one sheet, and laid it down, he turns his body towards the Tympan again; and, as he is turning, gives the next sheet on the White paper Heap a touch with the backside of the nail of his right thumb, as before, to draw it a little over the hither edge of the Heap, and lays it on the Tympan, &c. as he did the first; and so successively every sheet till the whole Heap of White paper be Worked off.

As he comes to a Token sheet, he undoubles that, and smooths out the crease with the backside of the nails of his right hand, that the Face of the Letter may print upon smooth paper. And being printed off, he folds it again, as before, for a Token sheet when he works the Reiteration.

Having Worked off the White paper, he removes the Heap to his left hand; then takes up the Paper board, and lays it on his right hand: and if it be Twelves, or any Form Imposed like Twelves, as Twenty fours, &c. he turns it from one long side of the paper to the other; that is, the long side of the paper that stands on his right hand when the printed side lies upwards, he turns over to his left hand, and lays the unprinted side upwards. In performing this, he takes from the Worked off Heap so much at once between both his hands as he can well govern, without disordering the evenness of the sides of the Heap, viz. a Token or more, and lays that upon the Paper board; then takes another list, and so successively, till he has turned the whole Heap.

Having turned the Heap, and made Register on the Reiteration Form, he works it off: but he somewhat varies his posture in the Laying on his Sheet: for as before, when he worked White Paper, he caught the sheet by the upper further corner with his right hand, he now, having taken up the sheet, catches it as near the further side of the further Point hole as he can, with the ball of his right hand thumb above the sheet, and the ball of his fore finger under the sheet, the readier to lay the Point hole over its respective Point: which having done, he slips his body a little backwards, and both his hands with it, his right hand towards the hither Point hole, with the back sides of the nails of his fingers to draw or stroke it over the Point; and the fingers of his left hand, as they come from the further corner,

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nimbly slipping along the bottom edge of the sheet, till they come to the hither corner; and then with his fore finger and thumb lays hold of it, to help guide the Point hole on that Point also: then Pulls that sheet as before, as he did the White Paper, and so successively all the rest of the Reiteration. The Token sheets, as he meets with them, he folds not down again, as he did the White Paper.

Printing Red or other Colours with Black.

When Red and Black are to be printed upon the same sheet, the Pressman first Makes Register, and Makes Ready his Form as before; then having a new Frisket, he prints upon his new Frisket with Black; and, having before a Proof sheet printed Black, with the words to be printed Red underlined, he takes off his Frisket, and lays it flat on a Paper board, and with a sharp-pointed pen-knife neatly cuts out those words on the Frisket, and about half a scabbard Margin round about the words, that he finds underlined on the Proof sheet; then sets the Frisket by till he has worked off his Heap with Black, and puts his common Frisket on the Joints of the Tympan again.

While the Pressman is Cutting the Frisket, the Compositor takes those Words out of the Form that are Underlined on the Proof sheet, and in their place puts Quadrats, m-Quadrats, Spaces, &c. to Justify the lines up again.

Then Locking up the Form, the Pressman works off the Heap black; which having done, he takes off the

common Frisket, and puts on his new cut Frisket: then taking a piece of Nonpareil Reglet, he cuts it into so many small slips as there are Whites in the Form to be printed with Red; these slips he cuts exactly to the length of the Quadrats, &c. the Compositor put in, and to the breadth of the body; but rather a small matter less than bigger, lest they bind at the bottom of the Shank of the Letter: for when the Compositor takes out the Quadrats, &c. he pricks on the point of a Bodkin the bits of Reglet, and puts them into their respective holes: and being loosened off the point of the Bodkin with the blunt point of another Bodkin, they are laid down flat on the Press stone; these slips are called Underlays.

Upon these Underlays the Compositor puts in again the Words or Letters he took out before the Form was Worked off Black: so that these Words now stand higher than the other Matter of the Form, and therefore will print when the other Matter will not. But yet for the better assurance that the other Matter print not, the New-cut Frisket was prepared, which hinders any thing to print but what Prints through the holes cut in it; which holes these Underlaid Words fall exactly through.

Having mixed the Red, or any other intended colour with Varnish, he Beats the Form; and Pulls it very lightly, lest these Underlaid Words, standing higher than the rest of the Matter, print too Hard.

running into unnecessary diversions of postures or gestures in his labour; and it eases his mind from much of its care, for the same causes have constantly the same effects. And a Pull of the same strength upon the same Form, with the same Beating, and with the same Blankets, &c. will give the same colour and impression.

That every two sheets, if the Form be small Letter (rarely three, unless Great Letter) he takes Ink; and that sheet to which he Takes not Ink, he steps to the Heap to overlook the colour, and see whether he has Taken too much or too little Ink; and to see if any accidents have befallen the Form; that is, if any Letters, Quadrats or Furniture, &c. rise, and that no Letters are Battered; that the Register keep good; that no Pick be got into the Form, or any other accident that may deface the beauty of the Work; but all this while he still keeps his Balls Distributing.

If he has taken too much Ink, which sometimes may happen (but mostly through carelessness) he will not take Ink again, till he has worked his Balls to a good and moderate colour. But if the sheet already Pulled should be so Black that it may not pass, he doubles or folds it in the middle, and lays it cross the Heap, that the Gatherer may take or leave it, in case the Heap falls short. If he foresees the next sheet will also be too Black, he takes a dry sheet of waste paper between his Balls and Distributes upon that dry sheet, that it may take off the Ink.

If Letters, Quadrats or Furniture Rise, he puts them down; the Letters and Quadrats with his Bodkin, and the Furniture with his Hammer, and Locks the Quarter they are in a little harder.

If any Letters are Battered, he Unlocks the Quarter they are in, and desires the Compositor to put others in their room.

If Bearers fail, that is, squeeze thinner with long Pulling on, he takes those Bearers off, if they are on the Frisket, and puts on thicker: but if the Furniture is Underlaid, he Unlocks the Quarter they are in, and Underlays them according to his judgment.

If Register be Out, which sometimes happens by the starting of the Quoins, he mends it.

If a few Picks are got into the Form, that is, little bits of paper, skin or Film of Ink, grease or other filth which may stick to the Face, or get into the hollows of the Letter, he with the point of a needle picks them out: but if many be got in, he takes off the Form and washes it.

And though he every other sheet overlooks the Heap, yet his Companion that Pulls, by an habitual use casts his eye upon every single sheet; yet rarely hinders his riddance by it; for while he is taking the sheet off the Tympan, he gives a quick spreading glance upon it, and lays it down, unless he perceive somewhat to mend: for then he lets it lie on the Tympan till he has mended what was amiss.

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And that he may take Ink more equally, to keep the Balls of an equal fatness, he keeps the Rubb'd out Ink on the Ink-block of an equal thickness; to do which, he with the under-edge of the bottom of the Brayer draws often from the mass of Ink a small, and as near as he can guess an equal quantity of Ink, and with the Brayer rubs and disperses that Ink of an equal thickness, all over the hither corner of the Ink-block. While this is doing, he holds the Balls upright on one another in his left hand, leaning the handle of the uppermost Ball-stock against his breast.

The equal and often Taking of Ink in a small quantity, and constant Distributing of the Balls, is the only means to keep the Heap throughout of an equal colour, and to avoid Leaving Friars.

If he meets with sheets in his work, torn, or stain'd, &c. he prints them not, but throws them under the Paper-bench; and if any crease or wrinkles be in any sheet, he laying the back of his four left hand fingers upon a smooth place in the sheet, rubs with the back of the nails of his right hand fingers from him upon the wrinkles, till he has smoothed them.

Sometimes, through the loose Hanging of the Platin on its Cords, or through the much wearing of the Hose, or the Garter, or the Worms in the Nut and Spindle, or the irregular wearing of the Toe of the Spindle, in its Nut, or too much play of the tenons of the Head in their mortises, or the irregular dryness of the Tympan, or through irregular Running in of the Carriage,

Carriage, it will happen that the Letter will double upon the sheets, that is, print double.

If the loose hanging of the Plattin be the cause, it is easily mended by turning about the Female Screws fitted to the tops of the Hofs.

If the Hofs be worn, or the square holes the Hofs works in, it may for the present be botched up by putting scabbard between the Hofs and the square holes of the Till; but to mend it perfectly, either another Till must be made, or new Hofs, or both.

If the Garter be worn too wide, the smith must either mend the old, or make a new one.

If the Worms of the Nut or Spindle be worn, the Spindle must be examined by the smith, and made true, and have a new Nut cast on it.

If the Toe of the Spindle and its Nut, or either of them, be worn irregularly, it is smith's work to mend.

If the tenons in the Head have too much play in their mortises (which though it seldom happens, yet if the Head were not made of well seasoned stuff, the tenons may be subject to shrink, and so have too much play), there is no substantial remedying this fault, but by making a new Head.

If an improper temperature of the Tympan be the cause; that is, when it is dry in one place and moist in another, the dried place may by its spring force the paper against the Face of the Letter, and in part print it before it comes to feel the force of the Plattin; but this is rather flurring than doubling; and when the
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force of the Platin does come, the spring in the dried part will again remove the paper, and the force of the Platin give its full impresson where the paper is thus removed: but when it is real Doubling, it happens generally on the whole sheet.

This Doubling or Slurring is mended, by reducing the dryest part of the Tympan to an equal moist temperature with the moistest.

Doubling often happens in the middle of the Form; and the reason is, because the foreside of the Platin prints beyond the middle of the Form at the first Pull, and the hindside of the Platin by the second Pull reprints part of the First Pull: so that a spring in the Tympan removes the paper in this interval of time.

This fault is easily mended by an exact observing the Running in of the Carriage.

Doubling may also happen by the too loose and flapping straining of the Tympan, when it was first drawn.

This cannot be mended without taking the Tympan off, and Drawing on a new one.

If the Joints are so faulty (as sometimes old Joints are) that the Pressman cannot keep Register with them, the finish must make new, or mend the old.

When he leaves work, he covers the Form with the Tympan, to keep it from dust or filth that may fall on it; and takes out the Blankets to cover his Heap.

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